

C
T57uH
1918/19

TOLEDO UNIVERSITY BULLETINS

VOL. X

APRIL 1919

No. 14

TOLEDO UNIVERSITY

The Municipal University of Toledo, Ohio



THE LIBRARY OF THE

JUN 29 1931

UNIVERSITY OF ILLINOIS

CATALOG

1918 - 1919

Announcements

1919-1920

GENERAL OFFICES: UNIVERSITY BUILDING
Eleventh and Illinois Streets, - Toledo, Ohio

THE LIBRARY OF THE

JUN 29 1931

UNIVERSITY OF ILLINOIS



Digitized by the Internet Archive
in 2014

<http://archive.org/details/catalogue1918univ>

TOLEDO UNIVERSITY BULLETINS

VOL. X

APRIL 1919

No. 14

TOLEDO UNIVERSITY

The Municipal University of Toledo, Ohio



CATALOG

1918 - 1919

Announcements

1919-1920

GENERAL OFFICES: UNIVERSITY BUILDING
Eleventh and Illinois Streets, - Toledo, Ohio

TOLEDO UNIVERSITY

Announcements

1919 - 1920

CATALOG

1918 - 1919

The catalog, issued in the spring of each year, is intended to give such a description of the work of the University and such a digest of its rules as are needed by students. Neither the courses announced nor the rules given are valid beyond the succeeding year, for before the end of the succeeding year a new catalog will have been issued, superseding all previous catalogs. Ordinarily a student may expect to be allowed to secure a degree in accordance with the requirements of the curriculum laid down in the catalog in force when he entered the department in which the degree is offered, but the faculty reserves the right to make changes in curricula, as in rules, at any time when in its judgment such changes are for the best interests of the students.

Published by

THE MUNICIPAL UNIVERSITY OF TOLEDO, OHIO

CALENDAR FOR 1919.

1919	Sunday	Monday	Tuesday	Wednes.	Thursd.	Friday	Saturday	1919	Sunday	Monday	Tuesday	Wednes.	Thursd.	Friday	Saturday
Jan.	...	...	...	1	2	3	4	July	...	...	1	2	3	4	5
	5	6	7	8	9	10	11		6	7	8	9	10	11	12
	12	13	14	15	16	17	18		13	14	15	16	17	18	19
	19	20	21	22	23	24	25		20	21	22	23	24	25	26
	26	27	28	29	30	31	...		27	28	29	30	31	...	...
Feb.	...	...	...	...	...	...	1	Aug.	...	...	...	...	...	1	2
	2	3	4	5	6	7	8		3	4	5	6	7	8	9
	9	10	11	12	13	14	15		10	11	12	13	14	15	16
	16	17	18	19	20	21	22		17	18	19	20	21	22	23
	23	24	25	26	27	28	...		24	25	26	27	28	29	30
Mar.	...	...	...	...	...	...	1	Sept.	...	1	2	3	4	5	6
	2	3	4	5	6	7	8		7	8	9	10	11	12	13
	9	10	11	12	13	14	15		14	15	16	17	18	19	20
	16	17	18	19	20	21	22		21	22	23	24	25	26	27
	23	24	25	26	27	28	29		28	29	30	...	...	...	...
	30	31	...	...	...	...	...		...	...	...	1	2	3	4
Apr.	...	...	1	2	3	4	5	Oct.	...	...	...	...	...	...	...
	6	7	8	9	10	11	12		5	6	7	8	9	10	11
	13	14	15	16	17	18	19		12	13	14	15	16	17	18
	20	21	22	23	24	25	26		19	20	21	22	23	24	25
	27	28	29	30	...	...	...		26	27	28	29	30	31	...
May	...	...	...	...	...	1	2	Nov.	...	...	...	...	...	...	1
	4	5	6	7	8	9	10		2	3	4	5	6	7	8
	11	12	13	14	15	16	17		9	10	11	12	13	14	15
	18	19	20	21	22	23	24		16	17	18	19	20	21	22
	25	26	27	28	29	30	31		23	24	25	26	27	28	29
	...	...	...	...	...	...	...		30	...	...	...	...	...	...
June	1	2	3	4	5	6	7	Dec.	...	1	2	3	4	5	6
	8	9	10	11	12	13	14		7	8	9	10	11	12	13
	15	16	17	18	19	20	21		14	15	16	17	18	19	20
	22	23	24	25	26	27	28		21	22	23	24	25	26	27
	29	30	...	...	...	...	...		28	29	30	31	...	...	...

CALENDAR FOR 1920.

1920	Sunday	Monday	Tuesday	Wednes.	Thursd.	Friday	Saturd.	1920	Sunday	Monday	Tuesday	Wednes.	Thursd.	Friday	Saturd.
Jan.	..	..	..	..	1	2	3	July	..	..	..	..	1	2	3
	4	5	6	7	8	9	10		4	5	6	7	8	9	10
	11	12	13	14	15	16	17		11	12	13	14	15	16	17
	18	19	20	21	22	23	24		18	19	20	21	22	23	24
	25	26	27	28	29	30	31		25	26	27	28	29	30	31
Feb.	..	..	..	..	..	..	..	Aug.	..	..	..	..	..	..	..
	1	2	3	4	5	6	7		1	2	3	4	5	6	7
	8	9	10	11	12	13	14		8	9	10	11	12	13	14
	15	16	17	18	19	20	21		15	16	17	18	19	20	21
	22	23	24	25	26	27	28		22	23	24	25	26	27	28
	29	..	..	..	..	..	..		29	30	31	..	..	..	..
Mar.	..	1	2	3	4	5	6	Sept.	..	..	..	1	2	3	4
	7	8	9	10	11	12	13		5	6	7	8	9	10	11
	14	15	16	17	18	19	20		12	13	14	15	16	17	18
	21	22	23	24	25	26	27		19	20	21	22	23	24	25
	28	29	30	31	..	..	..		26	27	28	29	30	..	..
Apr.	..	..	..	..	1	2	3	Oct.	..	..	..	..	..	1	2
	4	5	6	7	8	9	10		3	4	5	6	7	8	9
	11	12	13	14	15	16	17		10	11	12	13	14	15	16
	18	19	20	21	22	23	24		17	18	19	20	21	22	23
	25	26	27	28	29	30	..		24	25	26	27	28	29	30
May	..	..	..	..	..	..	1		31	..	..	..	..	..	..
	2	3	4	5	6	7	8	Nov.	..	1	2	3	4	5	6
	9	10	11	12	13	14	15		7	8	9	10	11	12	13
	16	17	18	19	20	21	22		14	15	16	17	18	19	20
	23	24	25	26	27	28	29		21	22	23	24	25	26	27
	30	31	..	..	..	..	..		28	29	30	..	..	..	..
June	..	..	1	2	3	4	5	Dec.	..	..	..	1	2	3	4
	6	7	8	9	10	11	12		5	6	7	8	9	10	11
	13	14	15	16	17	18	19		12	13	14	15	16	17	18
	20	21	22	23	24	25	26		19	20	21	22	23	24	25
	27	28	29	30	..	..	..		26	27	28	29	30	31	..

**MUNICIPAL ADMINISTRATIVE AND LEGISLA-
TIVE OFFICERS**
1918-19

MAYOR
HON. CORNELL SCHREIBER

CITY COUNCIL
C. C. KILBURY, *Vice Mayor*

E. D. CULLEN
AUGUST HOFF
B. J. DALKOWSKI
WARREN J. DUFFEY
C. C. COLLINS
W. R. ROGERS
HARRY T. IRWIN
CHARLES D. HOOVER

HARRY M. CURTIS
JOHN C. ARFT
CHARLES J. SCALLY
D. J. FOY
GUS A. HEIN
EDWARD F. O'SULLIVAN
THOMAS C. DEVINE
W. G. BITTER

BOARD OF DIRECTORS OF THE UNIVERSITY
WM. H. TUCKER, *President*
J. GAZZAM MACKENZIE, *Secretary*

HARRY E. MARKER
ALBERT H. MILLER
GEORGE P. HAHN
GOTTLIEB F. LOK

JOHN S. PYLE
HENRY STREETMAN
JAMES J. HALAPLEUS

UNIVERSITY CALENDAR.

1919.

May 30	Holiday.
June 6-10	Examinations.
June 10	End of Second Semester.
June 12	Commencement Exercises.
June 26-28	Registration of Students for Summer Session.
June 30	Summer Session Begins.
July 4	Holiday.
Aug. 8	Summer Session Ends.
Sept. 10-13	Registration of Students for First Semester.
Sept. 15	First Semester Begins.
Oct. 21	Founder's Day.
Nov. 27-30	Thanksgiving Recess.
Dec. 22	Christmas Recess Begins.

1920.

Jan. 5	Work resumed in all Colleges.
Feb. 2-6	First Semester Examinations.
Feb. 6	First Semester Ends.
Feb. 11-14	Registrations for Second Semester.
Feb. 16	Second Semester Begins.
Feb. 22	Holiday.
Mar. 18	University Day.
May 30	Holiday.
June 11-15	Examinations.
June 15	End of Second Semester.
June 17	Commencement Exercises.

CONTENTS

The University	2
Officers of Instruction	16
Officers of Administration of the University.....	20
The University Public Health Laboratories	20
The University Public Service Bureau	21
Historical Sketch of the University.....	21
Organization of the University.....	22
Public Research and Service Activities of the University.	
Public Health Laboratories—Bacteriology and Pathol-	
ogy	23-24
Public Health Laboratories—Chemistry.....	24
University Public Service Bureau	24
University Public Service Bureau, The Psychological	
Clinic	25
Instructional and Research Activities of the University.	25
Administrative Regulation	25
Classification of University Students.....	25
Entrance Requirements	26
Admission by Certification	26
Admission by Examination	27
Advanced Credit	27
Admission to Advanced Standing.....	27
Resident Work Required for Diploma or Degree.....	28
Physical Training	28
Library Facilities	23
Fees	28
University Semester Fees.....	23
Important Notice	29
Changes in Registration.....	29
Class Routine and Scholastic Requirements.....	29
Absences	29
Semester Hours	29
Grades	29
The College of Arts and Sciences.....	30
The Faculty of the College.....	31-35
Work of the Arts College.....	36
Advisers	37
The Junior College.....	37
The Aim of the Junior College.....	37

	Page
Entrance Requirements	37
Admission of Special Students.....	38
The Diploma of the Junior College.....	38
The Senior College.....	39
The Aim of the Senior College.....	39
Admission into the Senior College.....	40
Course Requirements for the Degree of Bachelor of Arts	40
The Graduate Division.....	40
Aims of the Graduate Division.....	40
Requirements for the Degree of Master of Arts.....	41
The Extension Division.....	41
Aims of the Extension Division.....	41
Admission of Extension Students.....	42
Descriptive Catalog of Courses offered in the College.....	42-74
What the Course Numbers Indicate.....	42
Bacteriology	43
Biology	44
Chemistry	45
Economics.	47
Education	49
English	51
English Literature	54
French	57
German	58
History	59
Hygiene and Sanitation	62
Mathematics	63
Philosophy	64
Physical Education	65
Physics	65
Political Science	66
Psychology	68
Sociology	70
Spanish	73
Register of Students, 1918-19.....	74
First Semester, Regular Students	74
First Semester, Special Students	76
Second Semester, Regular and Special Students.....	78
The College of Education.....	83
The Faculty	84
The Aims of the College of Education.....	85
The Degree of Bachelor of Science.....	85
The Degree of Bachelor of Science in Elementary Edu- cation	86

	Page
Matriculation Requirements for Degree.....	86
Course Requirements for Degree.....	86
The Degree of Bachelor of Science in Secondary Educa- tion	86
Matriculation Requirements	86
Course Requirements	87
Relation of the Teachers' College to the Teacher Training Work of the State.....	87
Descriptive Catalog of Courses offered in the Teachers' College	88-94
What the Course Numbers Indicate.....	88
Education	89
Elementary Education	91
History	92
Psychology	92
Secondary Education	93
Sociology	94
Registration of Students, 1918-19.....	95
First Semester, Regular Students	95
First Semester, Special Students	96
Second Semester, Students.....	96
The College of Commerce and Business.....	97
The Faculty	98
Foreword	99
Establishment of the College.....	99
Education for the Profession of Business.....	99
Business Experience	100
Work of the College of Commerce.....	100
Requirements for Admission.....	100
Diplomas, Degrees and Certificates.....	101
Diplomas	101
Degrees	101
Certificates	101
Diploma Courses	102
Business Administration	102
Accounting	102
Descriptive Catalog of Courses offered in the College....	103-111
Accounting	103
Advertising	105-109
Banking	105
Business Administration	106
Business Law	106

	Page
Economics	107
English	108
Marketing	109
Psychology	110
Sociology	110
Transportation	111
Register of Students, 1918-19.....	111
First Semester, Regular Students	111
First Semester, Special Students	112
Second Semester, Regular and Special Students.....	113
The College of Industrial Science.....	117
The Junior Engineering College Division.....	118
The Faculty	118
Foreword	120
Requirements for Admission	120
By certificate	120
By examination	121
Fees	121
Physical Training	121
Schedule of Required Courses.....	121
First Year Engineering Work.....	122
Second Year Chemical Engineering	122
Second Year Civil Engineering	122
Second Year Electrical and Mechanical Engineering...	123
Two-year Electrical Engineering Curriculum.....	123
Evening Junior Engineering Division Classes.....	124
Descriptive Catalog of Courses offered in the Junior En-	
gineering College Division	124-130
Chemistry	124
Civil Engineering	125
Electrical Engineering.....	126
English	127
Mathematics	128
Mechanical Engineering	129
Physics	130
Register of Students in Junior Engineering College....	130
First Semester	130
Second Semester	131
The Industrial Division.....	132
Instructional Staff	132
Department of Civil Engineering	134
Department of Electrical Engineering and Chemistry..	134
Department of Mechanical Engineering	134
General Description of Shop Courses.....	134-136
Shop Equipment	135

	Page
Auto Laboratory Equipment.....	135
Day Courses	135
Evening Courses	136
Descriptive Catalog of Courses offered in the Industrial	
Division	136-140
Automobile	136
Chemistry	137
Civil Engineering	137
Electrical Engineering	138
Machine Shop	138
Mathematics	140
Register of Students in Industrial Division, 1918-19....	141
First Semester	141
Second Semester	142
The College of Law.....	145
The Faculty	146
Requirements for Admission.....	146
Regular Students	146
Special Students	146
Administrative Regulations	147
Certificate of Attendance.....	147
Examinations	147
Requirements for Degrees.....	147
The Degree of Bachelor of Laws.....	147
Fees and Expenses.....	147
Courses offered in the Department of Law.....	148-151
Register of Students, 1918-19.....	152
First Semester	152
Second Semester	152
The College of Pharmacy.....	153
The Faculty	154
Foreword	154
Work of the College.....	154
Opportunities	155
Expenses	155
University Fees	155
Admission into the College of Pharmacy.....	155
Degrees and Certificates.....	156
Description of Courses offered in the College.....	156-162
First Year	156
Second Year	160
Information of Interest to Pharmacy Students.....	162
Registration	162
Class Work	162
Attendance	162
Semester	163

	Page
Grades	163
Examination	163
The Walding, Kinnan & Marvin Prize.....	163
The Dean, the Adviser of Pharmacy Students.....	163
Special Courses for Nurses.....	163
Register of Students, 1918-19.....	163
Enrolled in Pharmacy Courses.....	165-166
First Semester	165
Second Semester	166
Enrolled in Classes for Nurses.....	165
First Semester	165
Second Semester	166
The Summer Session	167
The Faculty	168
The 1918 Summer School.....	169
Fees	169
Announcement of the 1919 Summer Session.....	169
Description of Courses offered in 1918.....	169-173
Register of Students.....	173-176
Index	177

TOLEDO UNIVERSITY

Announcements

1919 - 1920

CATALOG

1918 - 1919

Students are expected to familiarize themselves with the College requirements, including those for graduation, and are responsible for arranging their elections of courses so as to meet the requirements. In order to do this intelligently it is necessary to study this announcement carefully.

If any requirements are not understood, however, the student should inquire at the Dean's office, or of his departmental adviser. He should do this when puzzled about any aspect of the course. While the student is responsible, yet the University authorities are anxious to assist him in every possible way to understand his requirements and to plan his work.

Study College requirements carefully.

OFFICERS OF INSTRUCTION.**1918-1919.**

- A. MONROE STOWE, A.M., Ph. D. 908 Prospect Ave.
President of the University and Professor of Education.
- AARON B. COHN, LL.B. 2435 Warren St.
Dean of the Law College.
Professor of Law.
- FREDERICK H. EVANS, B.M.E., M.E.¹ 1817 Lawrence Ave.
Dean, College of Industrial Science,
Professor of Mechanical Engineering.
- LORAIN FORTNEY, LL.B. Ph.D. 344 Irving St.
Professor of Commerce.
- PAUL M. HOLMES, M.D.¹
Professor of Industrial Hygiene,
Director, Industrial Hygiene Research.
- CARL HOLLIDAY, M.A., Litt.D. Norwood Apts., 19th St.
Dean, College of Arts and Sciences,
Professor of American Literature.
- OSCAR W. IRVIN, B.S., M.S.¹
Professor of Physics.
- THOMAS L. KIBLER, Ph.D.¹
Dean, College of Commerce,
Professor of Transportation and Economics.
- HENRY R. KREIDER, A.B., A.M., Ph.D. 41 Homewood Ave.
Professor of Chemistry.
- WILLIAM M. LEISERSON, A.B., Ph.D.¹ 624 Acklin Ave.
Professor of Political Science and Economics,
Director of Division of Municipal Research and Reference.
- FRANK E. NURSE, A.B., B.D., Ph.D. 28 Empire Apts.
Professor of Modern Languages.
- PARK L. MYERS, M.D. 2201 Glenwood Ave.
Professor of Organic Chemistry.
- FRANK U. QUILLIN, A.M., Ph.D. 1460 W. Delaware Ave.
Acting Dean of College of Commerce, and of College of Education,
Professor of Educational Sociology and Business Administration.

(1) Absent on leave, 1918-1919.

(2) Deceased.

(3) First Semester.

WILLIAM MCK. REED, Ph.G., Ph.C. 419 W. Central Ave.
Dean, College of Pharmacy,
Professor of Theory and Practice of Pharmacy.

Associate Director of University Public Health Laboratory.
 ROY C. START, Ph.G. 2435 Warren St.
Professor of Materia Medica.

AUGUSTUS W. TRETTEIN, A.B., Ph.D. 2208 Rosewood Ave.
Director of Psychological Clinic,
Professor of Psychology.

ROBERT NAYLOR WHITEFORD, A.B., A.M., Ph.D. 2252 Franklin Ave.
Professor of English Literature,
Director of Graduate Study.

WALTER F. BROWN 2044 Horton St.
Acting Professor of Physics.

HARRY SYLVESTER WILL, Ph.D. 3714 Hoiles Ave.
Acting Professor of Social Science.

GLENN D. BRADLEY, A.M., Ph.D. 2111 Putnam St.
Associate Professor of History,
Director of Publicity and Extension Work.

JOHN B. BRANDEBERRY, A.B., A.M. 1453 Poole St.
Associate Professor of Mathematics.

JOHN W. DOWD, A.B., A.M., LL.D. 2574 Monroe St.
Associate Professor of Mathematics.

ALEXANDER GWIAZDOWSKI, M.E. 555 Fernwood Ave.
Associate Professor of Mechanical Engineering.

DAVID W. HENRY, A.B., A.M. 628 Norwood Ave.
Associate Professor of Education.

FREDERICK JUCHHOFF, LL.M., Ph.D. 208 Nineteenth St.
Associate Professor of Accounting.

EDMUND K. KLINE, A.B., A.M. 3257 Collingwood Ave.
Associate Professor of Bacteriology,
Associate Director, Public Health Laboratories in charge of
Bacteriology Laboratory.

A. NORMAN LAIRD, B.C.E., M.S.¹
Associate Professor of Civil Engineering.

FRANK J. PAVLICEK, Ph.B. 302 Columbia St.
Associate Professor of English.

- GUY E. VAN SICKLE, A.B., A.M. 1026 Grand Ave.
Associate Professor of Chemistry.
- REX W. WELLS, A.B.³ 2068 Broadway
Associate Professor of Modern Languages.
- SYLVIA B. HOLLIDAY, A.B., A.M. Norwood Apts., 19th St.
Assistant Professor of English,
Acting Dean of Women.
- FELIPE MOLINA, B.L. 938 Prospect Ave.
Assistant Professor of Spanish.
- R. BADER 530 Fernwood Ave.
Instructor, Auto Theory and Practice.
- ROY J. COLBERT, A.B.¹
Instructor in Sociology.
- W. GWIAZDOWSKI 1020 Pinewood Ave.
Instructor in Machine Shop Practice.
- BENJAMIN MALLARY, A.B.¹
Instructor in Commerce.
- HUBERT C. WOODBURY 2439 Parkwood Ave.
Instructor in Mechanical Drawing.
- JAMES AUSTIN, JR. 727 Oakwood Ave.
Part Time Instructor, Pharmaceutical Jurisprudence.
- AMOS L. CONN, LL.B. Perrysburg Road
Part Time Instructor, Law.
- SHOLTO M. DOUGLAS 2252 Putnam St.
Part Time Instructor, Law.
- MRS. MARGARET DREYFUS³ 2503 Glenwood Ave.
Part Time Instructor, French.
- ROLLIE L. DRYFUSE, Ph.G. 952 Pinewood Ave.
Part Time Instructor, Botany,
Laboratory Assistant in Chemistry.
- CLARENCE EBERLY² Perrysburg, O.
Part Time Instructor, Map Making and Surveying.
- MAURICE ELGUTTER 2522 Lawrence Ave.
Part Time Instructor, Advertising.
- MRS. BESS EMCH, Ph.G. 708 Spencer St.
Part Time Instructor, Histology.

THE COLLEGE OF ARTS
AND
SCIENCES



Announcements

1919 - 1920

CATALOG

1918 - 1919

Students are expected to familiarize themselves with the College requirements, including those for graduation, and are responsible for arranging their elections of courses so as to meet the requirements. In order to do this intelligently it is necessary to study this announcement carefully.

If any requirements are not understood, however, the student should inquire at the Dean's office, or of his departmental adviser. He should do this when puzzled about any aspect of the course. While the student is responsible, yet the University authorities are anxious to assist him in every possible way to understand his requirements and to plan his work.

Study College requirements carefully.

THE UNIVERSITY PUBLIC SERVICE BUREAU.

A. MONROE STOWE, Ph.D., *Director*

CLARA I. SCHLETZ, *Secretary*

WILLIAM M. LEISERSON, A. B., Ph. D.,¹ *Municipal Reference and Research Division*

WENDELL JOHNSON, A.B., *Acting Director, Municipal Reference and Research Division*

ROY J. COLBERT, A.B.,¹ *Social Science Division*

DAVID W. HENRY, A.B., A.M., *Educational Research and Service Division.*

AUGUSTUS W. TRETTIEN, Ph.D., *Psychological Clinic*

HELEN STOCK, *Assistant, Psychological Clinic*

(1) On leave of absence.

HISTORICAL SKETCH OF THE UNIVERSITY.

In October, 1872, Jessup W. Scott and wife conveyed to certain selected trustees one hundred and sixty acres of land near the city of Toledo for the purpose of establishing "an institution for the promotion of knowledge in the arts and trades and other related sciences by means of lectures, oral instruction, of models, and representative works of art, of cabinets, of minerals, of museums instructive of the mechanic arts, and of whatever else may serve to furnish artists and artisans with the facilities for a high culture in their respective occupations in addition to what are furnished by the public schools of the city." The institution thus provided for was incorporated as "The Toledo University of Arts and Trades," the trustees of which in 1875 established a school of design, which was conducted by the University until 1886.

In 1884 the entire property included in the trust was transferred to the City of Toledo by the trustees of the Toledo University of Arts and Trades, and the Common Council of the city in accepting the trust, adopted an ordinance establishing the Toledo University as the Municipal University of Toledo, Ohio. From 1885 to 1906 the city, through its University, conducted the polytechnic school, which did effective pioneer work in the field of manual and industrial training.

About the year 1903 the work of the manual training school was taken over by the public schools of the city, and in accordance with the thought of the founder that the work of the University should be beyond and supplementary to the work of the public schools the University took steps to enlarge the scope of its activities. In 1904 the College of Pharmacy was established, and during the next few years more or less temporary affiliations were made with a number of local professional schools. In 1909 the University was reorganized and the College of Arts and Sciences and the College of Law were established. In 1910 the College of Industrial Science was established, while in 1914 the College of Commerce and Business was organized. In 1916 the Teacher Training Work of the University was reorganized under the control of the Teachers' College.

ORGANIZATION OF THE UNIVERSITY.

Toledo University, the Municipal University of Toledo, Ohio, consists of six municipal colleges, is maintained by an annual levy granted by the City Council and is governed by a Board of Directors appointed by the Mayor of the city. As a municipal institution of higher learning the University appeals for support and co-operation to the whole citizenship of the city.

The Board of Directors consists of nine members, three of whom are appointed by the Mayor biennially for terms of six years. The Board has full charge of all University property and funds. It determines the policies of the University and elects the proper officers of administration and instruction.

PUBLIC RESEARCH AND SERVICE ACTIVITIES OF THE UNIVERSITY.

That the Board of Directors recognizes that the University as a Municipal University has a service to perform for the city and its institutions as well as for the students of the University, is evident from the following resolution unanimously adopted by the Board of Directors, April 5, 1916:

"Whereas, Toledo University, the University of the People of Toledo, exists to offer through its departments instruction and service to our city and its people as similar institutions are of service to other communities, without advocacy or partisanship of any sort, and

"Whereas, The University Public Health Laboratories and University Public Service Bureau have been organized to vitalize the work of instructors and advanced students and with-

out charge to secure, organize, formulate and furnish in usable or readable form facts or scientific and technical information which may be requested by citizens, school authorities or city or other officials; therefore be it

“Resolved, By the Board of Directors of Toledo University, that the services of the University, its Departments and Bureaus are tendered to the city, its officials, its citizens and its social, educational and industrial organizations.”

The Laboratory of Bacteriology and Pathology of the University

Public Health Laboratories.

The work of this Division of the Health Laboratories is divided into several phases:

Public Health Administrative Measures.

Public Health Prophylactic Measures.

Diagnostic Pathological Service.

Research in Bacteriology and Physiological Chemistry.

Instruction of Advanced University Students.

Administrative measures are those by which we aid the Administrative Division of the Department of Health in establishing and maintaining quarantine, in tracing down foci of infection, and in preserving the general health of the community. Regular examination of diphtheria swabs from patients and contacts, of material from typhoid patients, contacts, etc., as well as routine examination of the water and milk supply of the city are included under this general head. At times, special investigation into other classes of food supplies are instituted as they seem to be indicated.

Prophylactic, or preventive, measures consist in the preparation of various types of vaccines which may be obtained by physicians free of charge for prophylactic treatment of their patients and of the general public. Our most notable work along this line was the preparation of Influenza Vaccine during the recent epidemic. Besides that we are prepared to furnish stock vaccines of Staphylococcus and hope in the next year to be in position to manufacture Typhoid, Para-typhoid, and Pneumonia vaccines.

Diagnostic Service consists in giving to the charity patients of the physicians the services that are offered to the well-to-do patients by Commercial Diagnostic Laboratories. This work includes the examination of blood, sputum, urine, tissues, etc., and efforts are made to maintain the efficiency at the highest possible point, both in the speed of obtaining the report and the variety of examinations made. Up to the present, we have been more or less confined to bacteriological examinations, but within the next few months we will be in position to make the physiological chemical tests that have recently attracted so

much attention among the Medical profession. In connection with our Diagnostic Service, we co-operate with the Municipal Hospitals and Dispensaries and with the Civil Service Commission in doing laboratory work.

Research is carried on as time permits, by members of the staff, or by especially proficient advanced students. Each individual so engaged is permitted to choose, so far as possible, his own line of work. The only requirement is that it shall lie within the scope of the Medical Sciences, and that he shall be judged sufficiently and trained successfully to pursue the line of work selected.

The equipment is quite ample for all work above mentioned, and efforts are continually made to increase and modernize the equipment in all departments. Much of it, especially in the Physiological Chemical Laboratory, has been purchased quite recently; all of it is in excellent condition. Laboratory animals are maintained in a special house, in West Toledo, but are at all times accessible to the staff and advanced students.

During the past year (1918) we have examined a total of 21,304 specimens, and prepared vaccines worth approximately \$6,500.

The Chemistry Laboratory of the University Public Health Laboratories.

The University Public Health Laboratories, Department of Chemistry, offer exceptional advantages to advanced students of chemistry in research work. A variety of substances are constantly under consideration as to their composition, purity, wholesomeness, etc., to determine whether or not they comply with the laws of the State and city, governing the sale of such products. These substances may be listed under the heads of milk, beverages, oils, spices, meats, fruits, vegetables, water, cereal foods, nuts, sugars, etc.

The Laboratory is fully equipped with modern apparatus and supplies to be used in detecting fraudulent adulterations, substitution, and sophistication of food products, together with their nutritive, economic and social values.

The University Public Service Bureau.

Through its Public Service Bureau the University places at the disposal of Toledo and its citizens various types of professional services. The Division of Municipal Research and Service has been of assistance to city administrative and legislative officials. The Division of Social Service has been of service to various social organizations of the city as well as to the courts and city departments. The Division of Educational Research and Service aims to co-operate with the schools and other edu-

cational agencies of the city. Each of these divisions of the University Public Service Bureau is utilized by the instructional departments of the University in providing vital studies and opportunities for service on the part of advanced students.

The Psychological Clinic.

The psychological clinic is organized for the purpose of investigating and making special studies in three fields of psychological research:

1. Psychological examinations and testing of children. Consultations and conferences with parents, juvenile court officers, and teachers in regard to school progress, conduct and deportment of children who may need special attention.

2. Examinations and treatment of cases of speech defects and other psychological disturbances.

3. Examinations and testing for personal and social control and vocational and business efficiency.

It is the purpose of the clinic to articulate so closely with parents, teachers, school and court officers that every child who offers a perplexing problem may be tested out in order to determine his real nature. It also aims to advise with and to suggest to those who are responsible for the child's progress the methods of procedure that will produce the best results in the training of citizens.

The clinic will also serve those who desire to test out their own personal powers and tendencies looking toward vocational selection and life interest. It also stands ready to act in an advisory manner in analyzing the human elements in business and industrial institutions, to eliminate human waste and to establish higher types of efficiency and control.

INSTRUCTIONAL ACTIVITIES OF UNIVERSITY.

At the present time the instructional work of the University is carried on through six colleges: the College of Arts and Sciences, College of Industrial Science, College of Commerce and Business, the Teachers' College, the College of Law and the College of Pharmacy.

The admission, government, management and control of the students, courses of study, discipline and other internal affairs of the University have been delegated by the Board of Directors to the University Faculty, composed of the President, Professors and Associate Professors of the University.

ADMINISTRATIVE REGULATIONS.

CLASSIFICATION OF UNIVERSITY STUDENTS.

Students admitted into the University are assigned to the College in which they desire to do the major part of their work.

They are then classified as regular, special, or extension students.

Extension students are students who have obtained permission of the University authorities to participate without credit in the work of classes.

Special students are those over twenty-one years of age who have not officially met the entrance requirements but have given evidence that they have had sufficient preparation successfully to carry on the work of the classes in which they desire to be enrolled. Special students who have done satisfactory work in any of the college courses may become regular students by presenting evidence that they have satisfactorily completed fifteen hours of high school work or their equivalent. A record is kept of the work of special students so that if subsequently they qualify as regular students and become candidates for diplomas or degrees all work which they have completed with a grade of A or B as special students may be credited toward meeting the course of requirements of the diploma or degree for which they are candidates.

Regular students are students who have officially met the University entrance requirements and are eligible to become candidates for diplomas or degrees conferred by the University.

Students are also classified either as full time or part time students.

In the morning and early afternoon work of the University full-time students are those who are enrolled for eleven or more hours of work during the semester, while part-time students in this work are students who are enrolled for less than eleven hours during the semester. Sixteen hours is the normal amount of work carried by full-time students in the morning and early afternoon classes, although any student who gives evidence of being able to carry additional work without sacrificing either his health or the quality of the work which he is doing, may enroll for as high as eighteen semester hours.

In the late afternoon and evening sessions of the University full-time students are students who are enrolled for six or more hours per semester, while part-time students in this work are enrolled for less than six semester hours.

ENTRANCE REQUIREMENTS.

The following are the entrance requirements into all of the Junior Colleges of the University. Students may be admitted as regular students, either by certification or by examination.

Admission by Certification.

Students to be admitted by certification must be able to submit certificates of graduation from a first-grade high school

of Ohio or from a secondary school rated by the educational authorities of the state as doing the work of a first-grade high school, as high schools are credited by the State Department of Public Instruction in Ohio. Application for admission should be sent to the University Secretary, Toledo University, University Building, Toledo, Ohio, who will forward a blank certificate to be filled out by the high school principal or by the superintendent of schools. In each case the student will receive a certificate of admission as soon as the credentials have been passed upon.

Admission by Examination.

Students who desire to be admitted by examination must comply with the following regulations:

1. They must give the University Secretary written notification of the fact that they desire to be examined. Such notification should be in the hands of the University Secretary at least three weeks before the date set for the first examination. (See University catalog).

2. In this notification the student must indicate clearly the subjects in which he wishes to be examined.

3. Students, in order to be admitted to their first entrance examination, must present themselves for examination in at least eight units of secondary school work.

4. In any subsequent examination students must present themselves for examination in at least two units of high school work.

5. In order to be admitted into any of the Junior Colleges of the University by examination the student must pass his entrance examination with a grade of at least 70%, and an average of 75% in all subjects.

ADVANCED CREDIT.

To obtain credit for work of collegiate grade accomplished at another institution of higher learning, the student must make application for such credit either upon entering the University or upon returning to the University from study at such institution.

ADMISSION TO ADVANCED STANDING.

Applicants for admission from other institutions of collegiate rank may be admitted upon presenting in advance of registration:

1. A certificate of honorable dismissal;
 2. Official transcript of credits with specifications of course, hours and grade;
 3. Official statement of entrance credits and conditions;
- and

4. Contemporary circulars of the institution previously attended.

Application for admission to advanced standing should be addressed to the University Secretary, University Building, Eleventh and Illinois Streets.

RESIDENT WORK REQUIRED FOR DIPLOMA OR DEGREE.

At least thirty semester hours of credit must be earned in residence in this University before the student may become a candidate for any degree or diploma conferred by the University.

PHYSICAL TRAINING.

Arrangements have been made with the Y. M. C. A. and the Y. W. C. A. whereby students may enter University classes in physical training on Tuesday afternoons. In the case of the young women, the fee for this work is \$3 per year; while in the case of the young men the fee is \$4 per semester, and entitles them to all of the swimming pool and gymnasium privileges of the Y. M. C. A.

LIBRARY FACILITIES.

There is a library at the University in which will be found the books immediately pertaining to the work of the various Departments and Colleges. The Toledo Public Library, situated a short distance from the University, offers additional facilities for research and reference. Students also have access to the library files of the Municipal Reference and Research Division of the University Public Service Bureau.

FEES.

The following table gives the semester fees, which must be paid before registering by residents of Toledo, and by sons and daughters of residents of Toledo:

University Semester Fees.

University Registration Fee	\$ 2.00
Gymnasium Fees, Men.....	4.00
Laboratory Fees, per course.....	3.00
Law Collegiate Tuition Fees, per course.....	5.00
Pharmacy College, Tuition Fees.....	28.00
Pharmacy College, Laboratory Fees.....	2.00
Shop Fees, per shop course.....	5.50
Diploma Fee	5.00

This diploma fee must be paid by the student before registering for the semester in which he intends to become a candidate for degree or diploma. In the event the student fails to complete the requirements the diploma fee will be refunded.

Important Notice.

A definite time before each new semester or term of work is begun, is set aside as registration week. This time is announced either in the University calendar or in special announcements. For students who fail to register during the time specifically set aside for registration, the University semester registration fee is \$3.00.

CHANGES IN REGISTRATION.

After a student has been registered no changes will be allowed without the consent of the Dean of the College in which the student is registered. Requests for such consent must be in the prescribed form of petition endorsed by the Instructors of the courses involved.

CLASS ROUTINE AND SCHOLASTIC REQUIREMENTS.

Absences.

Any student whose absences exceed four meetings of the class in the aggregate in the course will not receive credit in the course unless the student receives permission from the Administrative Board of the College in which the work is offered to substitute work for that semester in class. Such permission is granted only upon recommendation of the instructors concerned.

Semester Hour.

The unit in reckoning requirements for degrees and diplomas is a semester hour, equivalent to one fifty-minute exercise per week for the semester and requiring for preparation approximately two hours for each exercise.

Grades.

The student's grade is based upon class work and any tests or examinations given in the course.

Three passing grades are given, namely, A, B and C.

Work not done satisfactorily is marked D (incomplete) or E (failure). An incomplete must be removed before the close of the following semester. Otherwise it becomes a failure. To remove a failure it is necessary to complete satisfactorily the work of the course in class.

The grade X indicates that the student has been allowed to participate in the work without credit.

FACULTY

1918-1919

A. MONROE STOWE, A.M., Ph.D.

908 Prospect Ave.

President and Professor of Education.

Ph.B., 1903, A.M., 1904, Northwestern University; A.M., 1905, Harvard University; Ph.D., 1909, Columbia University; Instructor in Mathematics, Academy of Northwestern University, 1903-1904; Principal of Center School, Darien, Conn., 1906-1907; Principal, Training School, State Normal School, Hyannis, Mass., 1907-1909; Professor of the History and Philosophy of Education, Collegiate Department, State Normal School, Emporia, Kansas, 1909-1912; Supervisor of Practice, State Normal School, Whitewater, Wis., 1912-1913; Acting Professor of Education and Psychology, DePauw University, Greencastle, Ind., 1913-1914; Professor of Education and Acting President, Toledo University, 1914-1915; Professor of Education and President, Toledo University, 1915—

CARL HOLLIDAY, M.A., Litt.D.

Norwood Apts., 19th St.

Dean and Professor of American Literature.

B.S., University of Tennessee, 1901; M.A., same, 1903; Honorary Litt. D., Campbell College, 1915; graduate student in English, University of Chicago, 1902; University of Tennessee, 1902-1903; University of Virginia, 1906-1907; Fellow in English, University of Virginia, 1906-1907; Instructor in English for five years in private and public schools in Tennessee and North Carolina; Professor of English, Alabama State Normal College, 1905-1906; Instructor in English and Lecturer on Southern Literature, University of Virginia, 1906-1907; Professor of English, Cox College, 1907-1908; Professor of English, Southwestern Presbyterian University, 1908-1910; Acting-Professor of English, Vanderbilt University, 1910-1912; Associate Editor, American Library of Reference, 1913; Assistant Professor of English and Director of Department of Journalism, University of Montana, 1913-1914; Director of Bureau of Public Information, 1913-1917; Professor of English, 1914-1917; Professor of English and Director of University Extension Division, Toledo University, 1917-1918; Educational and Editorial Secretary, Y. M. C. A., Educational Work, France, January to October, 1918; Professor of American Literature and Dean of the College of Arts and Sciences, Toledo University, 1918—

SYLVIA B. HOLLIDAY, A.B., A.M.

Norwood Apts., 19th St.

Acting Dean of Women and Assistant Professor of English.

A.B., Dakota Wesleyan University, 1912; Assistant Principal, High School, and Teacher of English and History, Kimball, South Dakota, 1912-1914; A.M., University of Montana, 1915; Instructor in English, University of Montana, 1915-1917; Acting Dean of Women and Acting Professor of English, Toledo University, 1918; Acting Dean of Women and Assistant Professor of English, Toledo University, 1918-1919.

LORAIN FORTNEY, Ph.D., LL.B.

344 Irving St.

Professor of Commerce.

A.B. and LL.B., West Virginia University, 1900; Ph.D., University of Pittsburgh, 1903; Graduate Student, University of Chicago, seven quarters 1910 to 1916; Professor of Economics and Finance, Marquette University, 1911-1918; Professor of Commerce, Toledo University, 1918—

*PAUL M. HOLMES, M.D.

Professor of Hygiene.

*OSCAR W. IRVIN, B.S., M.S.

Professor of Physics.

B.S., State University of Kentucky, 1910; M.S., University of Kentucky, 1918; Graduate Student at State University of Kentucky, 1911-1912, and 1917-1918; Instructor in Physics, Sayre Institute, Lexington, Kentucky, 1910; Assistant in Physics, Kentucky State University, Lexington, Kentucky, 1910-1912; Professor of Physics, Toledo University, 1912—

HENRY R. KREIDER, A.B., A.M., Ph.D.

41 Homewood Ave.

Professor of Chemistry.

A.B., 1898, Franklin and Marshall; A.M., 1901, Franklin and Marshall; Ph.D., 1910, Johns Hopkins University; Professor of Natural Sciences, Pennsylvania State Forest Academy, Mont Alto, Pa., 1905-1907; Professor of Chemistry, Baltimore, Medical College, Baltimore, Md., 1910-1913; Assistant Professor of Chemistry, Carleton College, Northfield, Minn., 1913-1915; Professor of Chemistry, Toledo University, 1915—

*WILLIAM M. LEISERSON, A.B., Ph.D.

624 Acklin Ave.

Professor of Economics and Political Science.

PARK L. MYERS, M.D.

2201 Glenwood Ave.

Professor of Organic Chemistry.

Ohio Medical College of Cincinnati, Ohio, 1879; Professor of Chemistry and Toxicology, Toledo Medical College, 1889-1912; Professor of Organic Chemistry, Toledo University, 1912—

FRANK EDMOND NURSE, A.B., B.D., Ph.D.

28 Empire Apts.

Professor of Modern Languages.

A.B., Dixon College, 1898; B.D., McCormick Seminary, 1904; Ph.D., Heidelberg, Germany, 1908; Instructor in Mathematics and Latin, Dixon College, 1898-1901; Hebrew Fellow of McCormick Seminary, 1904-1907; Instructor in Mathematics, American College of Beirut, Syria, 1907-1908; Professor of Modern Languages, College of Emporia, Kansas, 1909-1910; Professor of Modern Languages, College of La Crosse, State Normal, Wisconsin, 1911-1916; Professor of Modern Languages, Marietta College, 1916-1918; Professor of Modern Languages, Toledo University, 1918—

*On leave of absence, 1918-19.

FRANK U. QUILLIN, A.B., A.M., Ph.D. 1416 W. Delaware Ave.
Professor of Business Administration and Educational Sociology.

A.B., Ohio Wesleyan University, 1903; A.M., Harvard University, 1905; Ph.D., University of Michigan, 1910; Teacher of Latin, Portsmouth, Ohio, High School, 1903-1904; History, Winona Lake, Indiana, Boys' Academy, 1905-1906; Principal of High School, Ypsilanti, Michigan, 1906-1912; Professor and Head of Department of Economics and Sociology, Knox College, Galesburg, Illinois, 1912-1917; Associate Professor of Business Administration, Toledo University, 1917-1918; Director of Summer Session, 1918; Professor of Business Administration Professor of Educational Sociology, 1918—.

AUGUSTUS W. TRETTEIN, A.B., Ph.D. 2208 Rosewood Ave.
Professor of Psychology.

State Normal School Diploma, 1894, Oshkosh, Wisconsin; B.L., 1899, University of Wisconsin; Ph.D., 1904, Clark University; Supervising Principal of Schools, Appleton, Wisconsin, 1894-1897; Professor of Psychology and Education, State Normal School, Oshkosh, Wisconsin, 1900-1907; Professor of Psychology and Education, University of South Dakota, 1907-1911; Associate Professor of Education and Supervisor of Student Teachers, University of Kansas, 1911-1914; Professor of Psychology, Drury College, 1914-1915; Lecturer in Education, Summer Sessions, University of Iowa, 1908; University of Missouri, 1910 and 1915; Kansas State Normal College, 1911, and University of Washington, 1913 and 1914; Professor of Psychology and Director of Psychological Clinic, Toledo University, 1915—.

ROBERT NAYLOR WHITEFORD, A.B., A.M., Ph.D. 2252 Franklin Ave.
Professor of English Literature and Director of Graduate Study.

A.B., 1890, Wabash College; Graduate Student for two years in English, German and French at Wabash College; A.M., 1892, Wabash College; Graduate Student in English and French at the Johns Hopkins University, Oct. 1, 1892, to June, 1893; Ph.D., (in course) June, 1893, from Wabash College; Head of Department of English, Lake Forest Academy, Lake Forest, Illinois, 1893-1894; Head of Department of English, High School, Peoria, Illinois, 1894-1906; Professor English Language and Literature and Dean, American International College, Springfield, Mass., 1906-1908; Professor of English Literature, Toledo University, 1910—.

WALTER F. BROWN 2044 Horton St.
Acting Professor of Physics.

Graduate, School of Science and Technology, Pratt Institute, 1912; Mery Engineering Co., Boston, 1913-14; Watertown Light and Power Co., 1914-15; Instructor in Science and Director of Vocational Department, Central High School, Troy, N. Y., 1915-18; Acting Professor of Physics, Toledo University, 1918—.

HARRY SYLVESTER WILL, Ph.D. 3714 Hoiles Ave.
Acting Professor of Social Science.

B.A., 1910, A.M., 1916, Ph.D., 1918, Ohio State University; Acting Director of Social Work, Columbus, Ohio, 1911-1914; Acting Professor of Sociology, Ohio Wesleyan, Delaware, Ohio, 1918; Acting Professor of Social Sciences, Toledo University, 1919—.

GLENN D. BRADLEY, A.M., Ph.D.

2111 Putnam St.

Associate Professor of History.

A.B., University of Michigan, 1907; A.M., University of Michigan, 1913; Ph.D., University of Michigan, 1915; Head, Department of History, Leavenworth, Kansas, High School, 1909-1910; Principal, Newton, Kansas, High School, 1910-1912; Instructor in English, University of Michigan, 1912-1914 and 1915-1916; Assistant in History, University of Michigan, 1914-1915; Assistant Professor of History and Acting Professor of English, Toledo University, 1916-1917; Associate Professor of History, Toledo University, 1917—; Director of University Extension, Toledo University, 1918—.

JOHN BRANDEBERRY, A.B., A.M.

1453 Poole St.

Associate Professor of Mathematics.

B.S., 1913, Mount Union College, Alliance, Ohio; M.A., 1915, Ohio State University; Science Teacher, High School, Newberry, Michigan, 1913-1914; Graduate Assistant in Mathematics, Ohio State University, 1914-1915; Assistant Professor of Mathematics, Toledo University, 1915-1918; Associate Professor of Mathematics, Toledo University, 1918—.

JOHN W. DOWD, A.B., A.M., LL.D.

2574 Monroe St.

Associate Professor of Mathematics.

A.B., 1869, Ohio University; A.M., 1872, same; LL.D., 1903, same; Acting Principal, Preparatory Department, Ohio University, 1869; Principal, Chillicothe, Ohio, Grammar School, 1869-1874; Principal, Troy, Ohio, High School, 1874-1875; Superintendent, Troy, Ohio, Public Schools, 1875-1880; Superintendent, Toledo, Ohio, Public Schools, 1880-1886; Associate Professor of Mathematics, Toledo University, 1918—.

DAVID W. HENRY, A.B., A.M.

628 Norwood Ave.

Associate Professor of Education.

Massachusetts State Normal Diploma, 1909, State Normal School, Hyannis, Massachusetts; A.B., 1911, Collegiate Department, State Normal School, Emporia, Kansas; Graduate Student at Cornell University, 1912; A.M., 1915, Columbia University; Supervisor's Diploma, 1916, Teachers College, Columbia University; Supervisor of School Gardens, Hyannis, Mass., 1908-1909; Principal of North Center School, Norwalk, Conn., 1909-1910; Supervisor of Training School Gardens, Emporia, Kansas, 1910-1911; Principal of Rowayton School, Norwalk, Conn., 1911-1913; Instructor in Open Air School, Ethical Culture School, New York City, N. Y., 1913-1914; Assistant Professor of Education, Toledo University, 1914-1915; Associate Professor of Education, Toledo University, 1915—.

EDMUND K. KLINE, A.B., A.M.

3257 Collingwood Ave.

Associate Professor of Bacteriology.

A.B., 1914, Franklin Marshall College; A.M., 1916, University of Pennsylvania; Research Assistant in Pathology, Henry Phipps Institute, University of Pennsylvania, 1914-1916; Bacteriologist, Pennsylvania State Board of Health, 1916-1918; Associate Professor of Bacteriology and Associate Director University Public Health Laboratories, Toledo University, 1918—.

FRANK J. PAVLICEK, A.B.

302 Columbia St.

Associate Professor of English.

A.B., Ohio State University, 1901; Graduate Student, Summer Sessions, 1905-1911, University of Chicago; Graduate Student, Summer Session, University of Michigan, 1913; Instructor, English and Public Speaking, Central High School, Toledo, 1902-1915; Waite High School, Toledo, 1915-1918; Associate Professor of English, Toledo University, 1918—.

†REX W. WELLS, A.B.

2068 Broadway

Associate Professor of Modern Languages.

GUY E. VAN SICKLE, A. B., A.M.

1026 Grand Ave.

Associate Professor of Chemistry.

A.B., 1909, Ohio State University; A.M., 1911, Ohio State University; Graduate Student in Chemistry, Ohio State University, 1911-1912; Student Assistant in Chemistry, Fellow in Chemistry, (two years), and Graduate Instructor in Chemistry, Ohio State University, 1908-1912; Assistant Chemist, Ohio Agricultural Experiment Station, Wooster, Ohio, 1912; Instructor in Chemistry, Toledo, Ohio, High Schools, 1913-1918; Associate Professor of Chemistry, Toledo University, 1918—.

FELIPE MOLINA, B.L.

938 Prospect Ave.

Assistant Professor of Spanish.

B.L., Institute National de Oriente of Nicaragua, 1899; Professor of Philosophy, Colegio de Sonoritas, San Jose, Costa Rica, 1912; Professor of History, Colegio de San Luis, Cartago, Costa Rica, 1913 and 1914; Professor of History and Literature, Instituto de Alajuela, Costa Rica, 1915; Instructor in Spanish Language and Literature, University of Kansas, 1916-1918; Assistant Professor of Spanish, Toledo University, 1919—.

*ROY J. COLBERT, A.B.

Instructor in Sociology and Biology.

MLLE. DE MONTFORT MAY

Chesbrough Annex

Instructor in French.

1898-1904, Lycee Lillie, France; 1904-1906, 1907-1909, 1909-1912, Private Tutor, England; 1913-1915, Private Tutor; 1916, Teacher of French, High Schools, Toledo, Ohio; Instructor in French, Toledo University, 1918—.

†Resigned, March 1st, 1919.

*On leave of absence, 1918-1919.

THE WORK OF THE ARTS COLLEGE.

At Toledo University there are six Colleges: the College of Arts and Sciences, the College of Commerce and Business, the College of Industrial Science, the College of Law, the College of Pharmacy, and the Teachers' College. Each of these Colleges has a specialized field into which students go for a special training. The field of the Arts College is more general, and in a sense more fundamental than the work of the other Colleges, since it underlies and precedes the specialized courses which they offer.

The professions are becoming yearly more exacting in the standard of education upon which they insist. Students who intend to specialize in professional work should familiarize themselves with the broad fields of human knowledge and possess themselves of the tools of learning without which a successful specialized training is impossible. Many students find it impossible to take four years of Arts work in addition to their professional training. All students would do well to take at least two years of Arts work in preparation for their chosen specialized courses. Specialization is essential. At the same time it is only one factor in a life that should be rounded to meet all phases of the problem of existence. The general work offered in the Arts College furnishes a foundation for the work which the other Colleges do.

Nor should this Arts training be narrowed in the direction of the particular vocation toward which the student is aiming. Rather it should be broadened in other directions, and aim to give the student an ability to appreciate the spiritual and cultural values in life: to understand the past and bring its lessons to bear upon the life of the present, to grasp the wider problems of existence and employ his chosen calling as a means to secure and enjoy a rounded life.

Toledo University, as a Municipal Institution, owes to every student who enters its doors, a training that will make for efficient citizenship. The democracy, a government by discussion, will stand or fall in proportion as citizens are intelligent or unintelligent in deciding the important questions of public policy that must constantly come before them.

The Municipal College of Arts and Sciences, supported by the city in order to afford men and women of all classes an equal educational opportunity, is responsible, in a peculiar sense, for this citizenship training. The Arts College has attempted to meet this responsibility through the Junior College.

Advisers.

Every student while in the College is assigned as an adviser some member of the Faculty, who assists him in selecting his studies, and, in a general way, aids him in the problems of his college life and work.

In the Junior College the adviser of the student is the Dean of the College, or some member of the Faculty of the University whom the Dean may designate because of special fitness to be of service to the student.

In the Senior College the election of studies for the Junior and Senior years is under the direction of the head of the Department in which the major is taken. This Department the student selects in his Sophomore year. The major professor becomes the student's adviser at the beginning of the Junior year.

THE JUNIOR COLLEGE.

THE AIM OF THE JUNIOR COLLEGE.

Recognizing the fact that a large number of students in a city college will be able to remain in college only two years, the Municipal College of Arts and Sciences has organized its work into two college divisions, referred to as the Junior and Senior Colleges. The aim of the Junior College is to familiarize the student with the most important phases of his modern urban environment, as well as to introduce him to the important lines of human thought and endeavor with which the studies of the Senior College deal more intensively. Too often the student who has completed two years of college work feels that his studies have taken him nowhere. The student who completes two years of work in the Municipal College leaves his college better prepared to meet the social, economic and political problems which will confront him, better prepared to render intelligent service to his fellow citizens.

ENTRANCE REQUIREMENTS.

Students may be admitted as regular or matriculated students, either by certification or by examination.

Students to be admitted by certification must be able to submit certificates of graduation from a first-grade high school of Ohio, or from a secondary school rated by the educational authorities of a state as doing the work of a first-grade high school, as high schools are credited by the State Department of Public Instruction in Ohio. Students desiring to be admitted by certification should make application to the University Secretary, Toledo University, Toledo, Ohio, just as early as possible. The University Secretary will then forward a blank certificate

to be filled out by the high school principal or by the superintendent of schools. In each case the student will receive a certificate of admission as soon as the credentials have been passed upon.

Students who desire to be admitted by examination should write the University Secretary, University Building, Toledo, Ohio, for rules and regulations governing admission by examination.

ADMISSION OF SPECIAL STUDENTS.

A limited number of students who have not completed a four-year high school course, but who desire to pursue particular subjects, may be admitted to instruction in the College as special students under the following regulations:

1. The candidate shall not be less than eighteen years of age.

2. Before registration day every candidate must submit to the Dean for approval a complete transcript of preparatory record. Candidates are requested to present their credentials at least ten days before Registration Day.

A candidate desiring to pursue studies begun in preparatory schools shall pass the entrance examinations in these studies, or present a satisfactory certificate of proficiency. If he desires to enter advanced classes in these studies, or to take up subjects begun in college, he shall satisfy the appropriate instructors as to his qualifications.

3. To continue work in any department, the special student must attain a grade of scholarship distinctly higher than the minimum permissible for regular students.

4. The Faculty reserves the right to require a special student to withdraw at any time.

5. In all respects special students shall be amenable to the rules for regular students.

THE DIPLOMA OF THE JUNIOR COLLEGE.

The diploma of the Junior College is conferred upon students who, under the regulations of the College and University, have satisfactorily completed the following requirements:

1. Six semester hours of collegiate work in the Department of English.

2. Two semester hours of collegiate work in the Department of Hygiene.

3. Two semester hours of work in the Department of Physical Training.

4. Fifty-two semester hours in the College of Arts and Sciences, fifteen hours of which may be done in other colleges or college divisions of the University, but all of which are elected by the student subject to the approval of the Dean of

the College or of the student's adviser appointed by the Dean.

It is assumed that the six years of work of the students in the secondary school and the Junior College will include at least the following minimum amounts of work in the respective studies:

Study.	Minimum Number of Years of Work
English Language and Literature.....	4
Mathematics	2
Sciences	2
Foreign Language	2
American History	$\frac{1}{2}$
Modern European History	$\frac{1}{2}$
Economics	1
Sociology	1
Political Science	1
Education or Psychology.....	$\frac{1}{2}$
Philosophy	$\frac{1}{2}$

A year of work is understood to mean a unit of secondary school work, or from four to six semester hours of collegiate work.

THE SENIOR COLLEGE.

THE AIM OF THE SENIOR COLLEGE.

While the aim of the Junior College of Arts and Sciences is to familiarize the student with himself, his college and his urban environment and to develop in him an interest in the various lines of human thought and achievement, the aim of the Senior College is to help the student make a more intensive study of the problems in a few of these lines.

A second aim of the Senior Municipal College is to give the student training in performing service for the municipality which has provided the educational opportunities which he has enjoyed. Candidates for the Bachelor of Arts degree are therefore required to do an assignment of work for the city or to perform some task in which a fairly large percentage of the citizens will be interested. The assignment or task must be approved by the head of the Department, the Dean of the College, and the President of the University. In this work the student is supposed to apply in the service of the city or of his fellow citizens the knowledge which he has gained in his major study. In the work of both Junior and Senior Colleges the student is constantly dealing with vital problems and facts connected with the life and activities of citizens of Toledo. The holder of the diploma has prepared himself for intelligent citi-

zenship, while the Bachelor of Arts has prepared himself to be of service to his fellow citizens, and has demonstrated his ability to be of such service.

ADMISSION INTO THE SENIOR COLLEGE.

Students to be admitted into the Senior College must present either a certificate of graduation from the Junior College or a certified statement from the Dean of the College that the requirements for the diploma of the Junior College have been satisfactorily completed.

Course Requirements for the Degree of Bachelor of Arts.

The degree of Bachelor of Arts is conferred upon the Senior College students who, under the regulations of the College and of the University, have satisfactorily completed sixty hours of collegiate work in addition to the requirements for the diploma of the Junior College, under the following regulations:

1. The total of one hundred and twenty-two hours of collegiate work required for the degree shall include:

a. A major of from thirty to thirty-six hours of work in courses of one department and specified courses in related departments, and

b. Two minors of eighteen hours each in courses of two departments and specified courses in related departments.

2. Of the total of one hundred and twenty-two hours of work required for the Bachelor of Arts degree as high as thirty hours may be selected from courses offered by other colleges of the University, subject to the approval of the Dean of the College.

3. Students who have satisfactorily completed ninety-two hours of work in the College of Arts and Sciences, as specified above, may be granted the A.B. degree from Toledo University upon satisfactorily completing thirty hours of a professional course in a recognized professional school or college, subject to the approval of the Faculty of the College of Arts and Sciences.

THE GRADUATE DIVISION.

AIMS OF THE GRADUATE DIVISION.

Certain courses offered in the Arts College are open to Graduate students. The Graduate Division of the College is organized to supervise and direct the work of these students.

Many students who have completed their undergraduate course in Toledo University desire to pursue further studies along lines in which they have become particularly interested. Teachers and other professional people who have done their undergraduate work in other institutions are anxious to continue in the direction of their professional need.

To all such persons the Graduate Division offers an opportunity for more extensive and specialized study than is possible under the conditions surrounding undergraduate life.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS OR MASTER OF SCIENCE.

1. While students holding the A. B. or the B. S. degrees may be registered as undergraduate students in the College of Arts and Sciences, only such work as is accomplished by them as graduate students will be credited toward the degree of Master of Arts or Master of Science.*

2. Students possessing an A. B. or a B. S. degree from Toledo University, or any other standard college or university, desiring to be classified as graduate students, should make formal application for such classification. Blank forms may be secured from the University Secretary. The application, together with credentials, should be sent or presented to the Director of Graduate Study at least one week before registration.

3. Candidates for the degree of Master of Arts, in addition to having fulfilled the requirements for the A. B. or the B. S. degree from Toledo University, must have satisfactorily completed at least thirty hours of work in not more than two departments of the University beyond the work required for the A. B. or B. S. degree. In addition to the courses in their major work, which must be in the department of their undergraduate major, they must do an assignment of work which will be of interest or value to the city or to a fairly large percentage of its citizens. The finished product of the work must be such as to win the approval of the majority of the committee, composed of the professor in charge of the work, the Director of Graduate Study, and the President of the University. In their minor subject they must complete at least twelve hours of work in Junior, Senior, and Graduate Arts courses, which in the catalog are numbered from 131 to 159 and from 1301 to 1599.

4. Work to be satisfactorily completed must be of a grade "A" or "B," as given in the colleges of the University.

THE EXTENSION DIVISION.

AIMS OF THE EXTENSION DIVISION.

The Extension Division is designed to meet the needs of those people who have no desire to pursue University work for

* Students possessing an A. B. or B. S. degree from Toledo University or any other standard college or university, who have pursued a major portion of their graduate work in scientific or technical studies may at their option receive the degree of Master of Science.

the purpose of securing credit towards a college degree, but who wish to keep in touch with the progress of the world. Discoveries are being made, theories are being proposed, research and investigation are bringing to light facts which revolutionize human thought. People who have been graduated from college in the busy, work-a-day world, as well as those who have never been to college, are desirous of availing themselves of an opportunity to hear and discuss the new ideas in various scientific fields. The Extension Division aims to provide for the needs of these people.

ADMISSION AS EXTENSION STUDENTS.

A very limited number of persons desiring to participate without credit in the exercises of the regular classes of the College may be admitted as hearers or extension students under the following regulations:

1. The candidate shall be not less than twenty-one years of age.

2. The candidate must secure the permission of the Dean of the College and of the Director of the Extension Division to be admitted into the College as an Extension student.

3. The candidate must secure the permission of the instructors of the classes in which he desires to be enrolled.

4. The Faculty reserves the right to require any Extension student to withdraw at any time.

5. In all respects, except in course and final examination, Extension students shall be amenable to all rules and regulations for regular students.

DESCRIPTIVE CATALOG OF COURSES OFFERED IN THE COLLEGE OF ARTS AND SCIENCES.

WHAT THE COURSE NUMBERS INDICATE.

The digit on the left indicates the college offering the course.

1. Indicates the College of Arts and Sciences, e. g., Bacteriology 132.

2. Indicates the Teachers' College, e. g., History 235.

3. Indicates the College of Commerce and Business, e. g., Commerce 321.

4. Indicates the Junior Engineering College Division of College of Industrial Science.

5. Indicates the Industrial Division of College of Industrial Science.

6. Indicates the College of Law.

The next digit indicates the year for which the course is planned.

1. Designates courses planned for Freshmen.
2. Designates courses planned for Sophomores.
3. Designates courses planned for Juniors.
4. Designates courses planned for Seniors.

BACTERIOLOGY.

Associate Professor Kline.

Courses in the Department of Bacteriology have a three-fold purpose:

1. To teach the general biology student the elements of bacteriology with special reference to the biologic relationships of the organisms studied.

2. To teach the pre-medical student the principal facts concerning the pathogenic organisms and their immunity reactions.

3. To teach those students who desire to specialize in laboratory bacteriology as much as possible concerning the technique employed in hospital, medical, and commercial laboratories, and the theories and facts of bacteriology and immunity.

This is accomplished by means of the elementary courses designated below, in connection with which the aims of each individual student are studied and his development along his chosen line undertaken by special assignments in literature and laboratory work.

Bacteriology 121 Household Bacteriology 2 hrs.

Mr. Kline, First Semester, 1919-20.

A lecture course throughout the first semester dealing with the problems arising in the home which may be better solved with the aid of a knowledge of bacteriology. Bacteria, yeasts, moulds as they occur in every day life are considered and the scientific basis underlying such processes as preserving and the proper cooking of food explained. Finally a short time is devoted to a consideration of the hygiene of the home. Text: Buchanan, "Household Bacteriology."

Bacteriology 123 Household Bacteriology, Laboratory 1 hr.

Mr. Kline, First Semester, 1919-20.

A laboratory course to accompany Bacteriology 121. A few hours a week are spent in the laboratory in practical work with bacteria, yeasts, and moulds. Such problems as sterilization, determination of thermal death point, etc., are dealt with at first hand and practical experiments made to show some of the common avenues of infection that may be fought by proper home hygiene.

Bacteriology 131 General Bacteriology 2 hrs.

Mr. Kline, First Semester, 1919-20.

This course includes a study of the elements of bacteriology, the biology of bacteria, their culture and chemical characteristics, etc., illustrated by studies of the bacteria commonly met with in

our daily life. This course is accompanied by numerous demonstrations of illustrative material with a lantern and microscope. Text: Jordan's "General Bacteriology."

Bacteriology 132 Laboratory Bacteriology 2 hrs.

Mr. Kline, Second Semester, 1919-20.

An afternoon a week is spent in learning the elements of bacteriological technique, the preparation of laboratory media, cultivation and isolation of bacteria; and the straining, and microscopic methods of study and differentiation. This course must necessarily be accompanied by the preceding course, general Bacteriology 131.

Bacteriology 133 Pathogenic Bacteriology 2 hrs.

Mr. Kline, Second Semester, 1919-20.

Prerequisite, Bacteriology 131-132.

A course for those students who desire for special reasons to take advanced work in bacteriology. The lectures deal in some detail with the Pathogenic bacteria, their morphological and cultural characteristics, pathogenicity, and immunity reactions. Students are encouraged to develop their own lines of interest by special reading, followed by written reports to the class.

Bacteriology 134 Laboratory Bacteriology 2 hrs.

Mr. Kline, Second Semester, 1919-20.

A laboratory course to accompany Bacteriology 133. The pathogenic organisms are studied in detail, including animal experimentation. This is followed by the experimental preparation of vaccine and antitoxins, and the study of the practical bacteriological examination of water and milk.

Bacteriology 141 Advanced Bacteriology

Mr. Kline, Both Semesters, 1919-20.

Prerequisite, Bacteriology 131-134.

Advanced Bacteriology open only to students who have completed the preceding courses and who wish to fit themselves to follow bacteriology as a profession. Open to a few specially qualified students only, who are trained in the Public Health Laboratory for positions as technicians or bacteriologists in hospital or commercial laboratories. The length of course and the hours of work are arranged to suit individual students and credit is not given until the student is judged proficient in all lines of laboratory work.

BIOLOGY.

While no courses in Biology were offered in the College of Arts and Sciences during 1918-19, the University will offer in 1919-20 in that College several courses in biology, among which will be a strong course for pre-medical students and for students desiring to specialize in psychology. These courses will be announced in a subsequent bulletin.

CHEMISTRY.

Professors Kreider and Myers, and Associate Professor Van Sickle.

The aims of this department are two-fold, culture and vocational.

We aim to supply a need in general culture. The chemical processes within ourselves and in nature about us are infinite. A better knowledge of these processes and of their application to every-day life not only brings a pleasure, but is also very useful.

A second aim is to meet the needs of those who choose the field of chemistry as their vocation, whether engaged in teaching or in experimental work in the laboratory. Here more thoroughness and accuracy are required. The courses will also meet the needs of those who intend to pursue medicine, pharmacy or dentistry.

Finally this Department seeks to stimulate a deeper interest and greater pleasure in the study of this science and at the same time to stress its application to life and to industrial problems.

Major, 36 hours.

Minor, 18 hours.

Chemistry 101 Elementary Inorganic Chemistry 2 hrs.

Mr. Van Sickle, First Semester, Tu., Fri., 7:05-8:00 P. M.

This course is intended for students who are beginning the study of the science. It deals with the reactions and properties of the non-metals and with the fundamental laws and theories of chemistry. The lectures are freely illustrated with experiments.
To be offered in 1919-20.

Chemistry 102 Elementary Inorganic Chemistry 2 hrs.

Mr. Van Sickle, Second Semester, Tu., Fri., 7:05-8:00 P. M.

The study of the non-metals is continued, followed by that of the metals. Prerequisite, Chemistry 101.
To be offered in 1919-20.

Chemistry 103-104 Laboratory 4 hrs.

Mr. Kreider, Mr. Van Sickle, Both Semesters,
Tu., Fri., 8-10 P. M.

To accompany Chemistry 101-102.
To be offered in 1919-20.

Chemistry 111a General Chemistry 3 hrs.

Mr. Van Sickle, First Semester, M., W., F., 8:05 A. M.

In this course the properties and chemical relations of the non-metals are studied. The fundamental principles of the science and the physico-chemical laws are emphasized. This course is not open to students who have had a year of high school chemistry.

To be offered in 1919-20.

Chemistry 112a General Chemistry 3 hrs.

Mr. Van Sickle, Second Semester, M., W., F., 8:05 A. M.

The second semester is given to the study of the reactions and compounds of the metals. The laboratory work consists of qualitative analysis. Prerequisite Chemistry 111a.
To be offered in 1919-20.

Chemistry 111b General Chemistry 3 hrs.

Mr. Kreider, First Semester, M., W., F., 8:05 A. M.

This course is intended to teach the student the fundamental principles of the science. It deals with the non-metals, their relations and reactions. The physico-chemical laws are emphasized. About two hundred experiments are performed and results recorded in note books. Students who have had one year's chemistry in a high school are admitted to this course.
To be offered in 1919-20.

Chemistry 112b General Chemistry 3 hrs.

Mr. Kreider, Second Semester, M., W., F., 8:05 A. M.

The lectures are devoted to the study of the metals, their classifications, compounds, and chemical properties, the processes of analysis and reactions. The laboratory work consists in the analysis of the solutions of metals and acids, and the dry mixtures of salts, oxides, and minerals. Prerequisite Chemistry 111b.

To be offered in 1919-20.

Chemistry 113-114 Laboratory 4 hrs.

Mr. Van Sickle, Both Semesters, M., W., 1-4 P. M.

To accompany Chemistry 111a, 112a, 111b, 112b.

To be offered in 1919-20.

Chemistry 121-122 Quantitative Analysis 2 hrs.

Mr. Kreider, Both Semesters, M., 10-11 A. M.

The simple gravimetric methods are applied in the laboratory. This is followed by electroanalysis and a number of volumetric determinations. The principles of analysis are then applied to a large number of industrial products. The lectures cover principles and methods of laboratory work. Prerequisite, Chemistry 111-112 a or b.

To be offered in 1919-20.

Chemistry 123-124 Laboratory 6 hrs.

Mr. Kreider, Both Semesters, M., W., 1-5 P. M.

To accompany Chemistry 121-122.

To be offered in 1919-20.

Chemistry 131 Organic Chemistry 2 hrs.

Mr. Myers, First Semester, M., Th., 10:05 A. M.

The student becomes acquainted in the laboratory with the methods involved in organic work, such as fractional distillation, crystallization, extraction, determinatives of melting and boiling points, and the preparation of typical compounds. Prerequisite, Chemistry 111-112.

To be offered in 1919-20.

Economics 123 Principles of Economics 3 hrs.
Mr. Fortney, First Semester, M., W., F., 11:05 A. M.

This course is the first half of a year's work in the principles of Economics and is designed to give the student an acquaintance with the working principles of Economics. The topics covered during the semester include the evolution of economic society, production, large-scale production, value and price, monopolies and trusts and business organization and administration. Practical subjects are introduced in order to supply material to illustrate the principles discussed.

To be offered in 1919-20.

Economics 124 Principles of Economics 3 hrs.
Mr. Fortney, Second Semester, M., W., F., 11:05 A. M.

This course following Economics 123 completes the study of principles of Economics. The work includes a study of money, credit, banking, domestic and foreign trade, transportation, labor problems, wages, interest, rent, profits, governmental control of industries and public revenues and expenditures.

To be offered in 1919-20.

Economics 131 Money and Banking 2 hrs.
Mr. Fortney, First Semester, M., W., 10:05 A. M.

The principles of money and credit; the functions and management of banks; savings banks, trust companies, farm loan banks, national banks and the Federal Reserve System of banks.

Economics 133 The Labor Problem 2 hrs.

**Mr. Leiserson, Mr. Saposs, Lecturer, First Semester,
W., 7-8:30 P. M.**

A course designed to give a birdseye view to the whole problem of industrial relations. Wages and earnings, hours of labor, unemployment, woman and child labor, immigration, industrial accidents, etc. Remedies, strikes, trade unions and Employers' Associations, arbitration and profit sharing, labor laws, workmen's compensation, health insurance, old age pensions, etc.

Economics 134 Immigration and Americanization 2 hrs.
Offered as Sociology 236 by Mr. Will.

A discussion of the newer phases of the immigrant problems in America. Immigrant heritages, characteristics of various nationalities. Possibilities of assimilation. The melting pot idea. School of the immigrant. Naturalization.

Economics 136 Statistical Theory and Method 2 hrs.
Mr. Fortney, Second Semester.

Principles of statistics involving their application to economic and other subjects. The course is designed to aid students in investigation and presentation of the information thus obtained. A moderate ability in mathematics is prerequisite.

To be offered in 1919-20.

Economics 143 Industrial Combinations 2 hrs.

No economic development of the last generation has attracted more widespread attention than the growth of trusts. The nature of monopoly power in modern industry, and the methods of securing monopoly control, are analyzed and explained. A study is made of the state and federal laws and court decisions which have accompanied the movement for the regulation of trusts.

To be offered in 1919-20.

Economics 144 History of Economic Thought 2 hrs.

The advanced student of economics should have a background in the history of economic thought. The course is designed to familiarize the student with the pre-classical economic theories: with the theories developed by the classicists in the 18th and 19th centuries, and to consider the modifications in economic theory which have occurred during the last twenty years.

Offered in 1919-20.

Economics 159a-b Social Science Seminar 2 to 4 hrs.

All thesis students are required to attend the Social Science Seminar, to present their theses for criticism and suggestion.

Related Courses Offered in Other Departments.

Of the following courses fourteen semester hours may be credited toward meeting the major requirements, and five semester hours toward meeting the minor requirements of the Department of Economics.

Accounting 331-332	Elementary Accounting	4 hrs.
Banking 331	Principles of Banking	4 hrs.
Business Admn. 311	Business Organization	2 hrs.
Business Admn. 321-322	Corporation Finance	4 hrs.
Marketing 344-345	Foreign Trade	2 or 4 hrs.
Political Science 159	Public Service Practice	2 hrs.
Transportation 331	American Transportation	2 hrs.

EDUCATION.**Professor Stowe and Associate Professor Henry.**

The aim of the courses offered by this Department in the Junior College is to help the student become thoroughly acquainted with himself and with the educational worlds from which he has come and into which as a freshman he has just entered. The department aims to co-operate with the College in its efforts to help the student discover his capacities and abilities, as well as the work in life for which he is best fitted.

In the Senior College the department seeks to offer such courses and to correlate its courses with such related courses in other colleges as will enable the student who majors in education to secure a comprehensive view of those forces in the individual and in society which are responsible for the development of the individual and the advancement of the race.

Major, 36 semester hours.

Minor, 18 semester hours.

Education 111 Principles of Human Behavior 2 or 3 hrs.

Mr. Stowe, First Semester, M., W., F., 8:05 A. M.

Aim: To help the students discover how and why they behave as they do, so that they may more intelligently influence the behavior of others as well as more effectively control their own conduct.

To be offered in 1919-20.

Education 112 College and University Education 1 or 2 hrs.

Mr. Henry, Second Semester, W., 8:05 A. M.

A comparative historical and psychological study of college and university education with a view of helping students to orient themselves in college and to discover the value of the various studies of the college curriculum. Attention is given to the discussion of some of the most important problems which confront college men and women.

To be offered in 1919-20.

Education 114 Modern Educational Problems 2 hrs.

Mr. Henry, Second Semester, M., F., 8:05 A. M.

This course is devoted to a discussion of the big educational problems confronting our schools and our teachers. For the greater part of the course the point of view will be that of the intelligent educational layman. The course also aims to prevent a waste of energy on the part of the young teacher by setting forth a systematic and comprehensive view (1), of the tasks that are to be accomplished by the school, and (2), of the working principles for the attainment of the end.

Education 133-134 History of Modern Education 4 hrs.

Mr. Henry, Both Semesters, Sat., 8:05 A. M.

Courses to be devoted to a study of the evolution of modern educational thought and practice in the field of secondary education from the early Christian times, in order to help teachers understand how things have happened to be as they are in the educational world today, as well as to solve more successfully the everyday problems of the high school classroom.

To be offered in 1919-20.

Education 143-144 Principles of Education 4 hrs.

Mr. Stowe, Both Semesters.

A study of the physiological, biological, psychological and sociological principles which are being incorporated in the best of modern educational thought and practice. This is followed the second semester by a study of educational values applied to secondary school subjects.

To be offered in 1919-20.

Education 148 Social Education 2 hrs.

Mr. Stowe, Second Semester.

A study of those principles of education which must be applied in order to develop social efficient human beings thru the activities of the school.

Courses Offered by the Department in the College of Education.

Education 231	Principles of Teaching	2 or 3 hrs.
Education 232	Teaching Pupils How to Study	2 hrs.
Education 235-236	Educational Magazine Club	2 hrs.
Education 237	Increasing Teaching Efficiency	2 hrs.
Education 238		2 hrs.

Supervision of Class Room Instruction

Education 241	School Administration	2 hrs.
Education 242	Educational and Standard Tests	2 hrs.
Education 247-248	Social Education	4 hrs.

Related Courses Offered in Other Departments.

Of the following courses 16 hours may be credited toward meeting the major requirements, and six hours toward meeting the minor requirements of this Department.

Economics 123	Principles of Economics	3 hrs.
Elem. Education 231-232	Child Study	4 hrs.
History 231-232	Modern European History	4 hrs.

or

History 125-126	Europe and Her Problems—1815-1915	6 hrs.
Philosophy 141-142	Ethics	4 hrs.
Political Sc. 131	Principles of Politics	3 hrs.
Psychology 121-123	General Psychology	3 hrs.
Psychology 235-236	Adolescence	4 hrs.
Sociology 121	Principles of Sociology	3 hrs.

or

Sociology 231-232		4 hrs.
-------------------	--	--------

Sociology and Modern Social Problems

Sociology 247-248	Educational Sociology	4 hrs.
-------------------	-----------------------	--------

ENGLISH.

Professor Holliday, Associate Professor Pavlicek,
Assistant Professor Sylvia Holliday.

The courses in English are designed to give the student the training necessary: (1), to enable him to speak and talk correctly his own language; and (2), to enable him also to express his thoughts, orally or in written form, clearly, forcefully, and with attention to style and dignity. The cultured successful man or woman today must have a broad, cultural training in English.

The general courses not only emphasize the above, but are designed especially to develop an interest in good literature and thus enlarge the vision of the student.

The specific courses are arranged with a view to enable the student to become familiar with a particular kind of English, viz: newspaper English, Engineering English, Business English, etc.

Students making English their major will be required to take English Composition. The work of the first semester is primarily a study of correct forms, and how to use them effectively. The work of the second semester deals with training in impromptu speeches, use of current events, reading a varied collection of newspaper and magazine articles of standard type, with the purpose of acquainting the student with the great social, economic and moral problems, thus providing him with interesting material, and also stimulating his interest in broad, cultural, vital problems.

Major, 30 hours.

Minor, 15 hours.

English 101-102 Public Speaking 3 hrs.

Mr. Pavlicek, Both Semesters, Th., 8:35-10 P. M.

A course dealing with both the theory and practice of Public Speaking, Debating and Dramatic Presentation.

English 103-104 English for Foreigners 0 hrs.

Mr. Pavlicek, Both Semesters, M., Tu., 8:30-10 P. M.

A course offering much practice in speaking and writing English, Grammar, Pronunciation, etc.

English 105-106 Public Speaking

Mr. Pavlicek, Both Semesters.

This course is designed primarily for club women who feel the need of training and practice in oral English. Members of the Educational Club, the various Shakespearean Clubs, and other women's organizations are invited to join the class. Membership is limited to twenty.

English 111-112 English Composition 6 hrs.

Mrs. Holliday and Mr. Pavlicek, Both Semesters,
Mon., Wed., Th., 10:05 A. M.

A vital Freshman English course. This course aims to help the student improve his ability to express himself effectively in writing thoughts which he feels are worth communicating to others. There is a great demand for men and women able to say what they want to say in the most forceful and telling way. This course is required of all College of Arts students who are candidates for the Junior College of Arts diploma.
To be offered in 1919-20.

English 111c Practical English 1½ or 2 hrs.

Mr. Pavlicek, Both Semesters, Th., 7 P. M.

The study of words, the construction of sentences, the writing of paragraphs, the organization of longer compositions,—are all a part of the work in this course. Some time is given to grammar and elementary principles of Rhetoric.

To be offered in 1919-20.

English 115-116 Elementary Journalism 4 hrs.

Mr. Holliday, Both Semesters, Tu., 7:05-9:00 P. M.

Study of important factors necessary for students interested in journalism: experience in assignments, interviews, and "covering" news.

To be offered in 1919-20.

English 117-118 Public Speaking 2 hrs.

Mr. Pavlicek, Both Semesters, Tu., Th., 8:05 A. M.

The purpose of the course is to give help in the selection and presentation of original thought. The work is more technical in that students are required to appear frequently before the class in all kinds of addresses.

To be offered in 1919-20.

English 117c Public Speaking 1½ or 2 hrs.

Mr. Pavlicek, Second Semester, Th., 8:30 P. M.

Attention is given to the occasional speech of presentation, acceptance, dedicative, eulogy, etc. The work is more technical than 315 and leads to more finished work than the first semester.

English 123-124 Advanced Composition 4 hrs.

Mr. Holliday, Both Semesters, Tu, Th., 10:05 A. M.

This course is devoted to the study and practice in writing of the character sketch, the editorial, the critique, the review, the autobiography, biography, history and scientific writing. Each student prepares one long article in one of these fields.

To be offered in 1919-20.

English 125-126 Oral Interpretation of Literature 2 hrs.

Mr. Pavlicek, Both Semesters.

A course in the interpretation and oral reading of the classics. A study is made of the printed page with the purpose of getting the intellectual and emotional value of the symbols. Practice will be given in oral reading.

English 135-136 Short Story 4 hrs.

Mr. Holliday, Both Semesters, Tu., 4:10-6 P. M.

While dealing with the short story, this course concerns itself with the fundamental problems of writing. The work is open only to those who have had English 111 and 112, and to others who can show proper qualifications. Students who have not been previously enrolled in this work and who desire to enter Course 135-136, must consult with instructor beforehand.

Related Courses Offered in Other Departments.

Of the following courses twelve semester hours may be credited toward meeting the major requirements, and three

semester hours toward meeting the minor requirements of the Department of English:

English Literature 111-112 4 hrs.

Modern American and English Literature

English Literature 123-124 4 hrs.

Survey of English Literature

English Literature 127-128 4 hrs.

English Literature 137-138 American Literature 4 hrs.

(Romantic Movement—Tennyson, Browning, Arnold)

ENGLISH LITERATURE.

Professors Whiteford and Holliday.

In the Department of English Literature the courses have been so arranged in sequence that students choosing them may be susceptible to an all-round development within the field of what the best minds in the world have known and thought and expressed. As the student advances from year to year in his college courses he is kept alive to the fact that English Literature is a thing of development.

It will be noted that the courses have been grouped so as to attract students throughout the four years of their university life.

The purpose of instruction in the Department of English Literature is to inculcate a desire on the part of undergraduates and graduates not only to become familiar with the best things that have been written, but also to develop sound scholarship.

Major, 36 semester hours.

Minor, 18 semester hours.

English Literature 111-112 4 hrs.

Modern American and English Literature

Mr. Whiteford, Both Semesters, Tu., Th., 11:05 A. M.

This course gives students an opportunity to read, discuss and appreciate the best of literature which is influencing the lives of men and women of today.

To be offered in 1919-20.

English Literature 111b-112b 4 hrs.

Modern American and English Literature

Mr. Whiteford, Both Semesters, Wed., 7-9 P. M.

This course offers an opportunity to read, discuss and appreciate the best of literature which is influencing the lives of men and women of today.

To be offered in 1919-20.

English Literature 123-124 4 hrs.

Survey of English Literature.

Mr. Holliday, Both Semesters, Tu., Th., 12 M.

A general survey of English Literature from the beginning to the present. This is equivalent to the Sophomore literature course required in most universities. Lectures on the general movements and periods, recitations on individual authors and their works, assigned readings, and written reports and criticisms.

To be offered in 1919-20.

English Literature 127 The Romantic Movement 2 hrs.**Mr. Whiteford, First Semester, Tu., Th., 9:05 A. M.**

From the publication of Wordsworth's Lyrical Ballads, 1798, to the death of Charles Lamb, 1834. A preliminary discussion of the early phases of English Romanticism followed by a more detailed study of the works of Wordsworth, Coleridge, Shelley, Byron, Keats, Scott, De Quincey and Charles Lamb.

To be offered in 1919-20.

English Literature 128 2 hrs.**Tennyson, Browning and Arnold****Mr. Whiteford, Second Semester, Tu., Th., 9:05 A. M.**

An intensive study of the poetry of Tennyson, Browning, and Matthew Arnold.

To be offered in 1919-20.

English Literature 131 Shakespearean Comedies 3 hrs.**Mr. Whiteford, First Semester, M., W., F., 11:05 A. M.**

A general discussion of Shakespearean comedies, with an intensive study of the texts of *Much Ado About Nothing*, *Twelfth Night*, *The Winter's Tale*, and *The Tempest*.

To be offered in 1919-20.

English Literature 132 Shakespearean Tragedies 3 hrs.**Mr. Whiteford, Second Semester, M., W., F., 11:05 A. M.**

An intensive study of the texts of *Julius Caesar*, *Hamlet*, *Macbeth*, and *Othello*.

To be offered in 1919-20.

English Literature 133 Victorian Era 1 2 hrs.**Mr. Whiteford, First Semester, Tu., 4:05-6 P. M.**

The works for particular study are those of Carlyle, Tennyson, Browning, Ruskin, Arnold, Rossetti, and William Morris.

English Literature 134 Victorian Era 2 2 hrs.**Mr. Whiteford, Second Semester, Tu., 4:05-6 P. M.**

Contemporary tendencies in English Literature. The literary tendencies in England today exemplified in the writings of Swinburne, Alfred Austin, Robert Bridges, William Watson, Francis Thompson, William Ernest Henley, John Davidson, Rudyard Kipling, Stephen Phillips, John Masefield, Bernard Shaw, Thomas Hardy, Mrs. Humphry Ward, William De Morgan, Enoch Arnold Bennett, and H. G. Wells.

English Literature 137 American Literature 2 hrs.

Mr. Holliday, First Semester, Wed., 4:05-6 P. M.

A study of the development of American Literature from Benjamin Franklin to Nathaniel Hawthorne.

To be offered in 1919-20.

English Literature 138 American Literature 2 hrs.

Mr. Holliday, Second Semester, Wed., 4:05-6 P. M.

A study of the development of American Literature from Hawthorne to William Dean Howells.

To be offered in 1919-20.

English Literature 141 English Fiction 3 hrs.

Mr. Whiteford, First Semester, M., W., F., 9:05 A. M.

A study of the development of English fiction from Sir Thomas Malory to Miss Mitford.

To be offered in 1919-20.

English Literature 142 English Fiction 3 hrs.

Mr. Whiteford, Second Semester, M., W., F., 9:05 A. M.

A study of the development of English fiction from Disraeli to William De Morgan.

To be offered in 1919-20.

English Literature 143 English Drama 1 3 hrs.

Mr. Whiteford, First Semester, Th., Fri., 4:05-6 P. M.

A study of the English drama from the Miracle plays to the closing of the theatres, 1642.

To be offered in 1919-20.

English Literature 144 English Drama 2 3 hrs.

Mr. Whiteford, Second Semester, Th., Fri., 4:05-6 P. M.

A study of the modern English drama from 1642 to 1917. Selected plays of the dramatists will be read in class. The course consists of lectures which place special emphasis on the drama of Pinero, Jones, Shaw, Phillips, Galsworthy, and Masefield. Contemporary Continental dramatic influences as exerted by such writers as Ibsen, Dumas *fils*, Eugene Brieux, Rostand, Sudermann and Hauptmann will be noted.

To be offered in 1919-20.

English Literature 147 English Literary Criticism 2 hrs.

Mr. Whiteford, First Semester, Mon., 4:05-6 P. M.

A study of the drift of English criticism from the Renaissance to the Romantic Movement.

To be offered in 1919-20.

English Literature 148 English Literary Criticism 2 hrs.

Mr. Whiteford, Second Semester, Mon., 4:05-6 P. M.

A study of the drift of English criticism in the 19th and 20th centuries.

To be offered in 1919-20.

English Literature 149 Anglo-Saxon 1 2 hrs.

Mr. Holliday. Time to be arranged.

This course consists of a study of Anglo-Saxon grammar preceding a careful reading of selections contained in Smith's *Anglo-Saxon Grammar*.

English Literature 150 Anglo-Saxon 2 2 hrs.

Mr. Holliday. Time to be arranged.

Beowulf. Text—the edition by A. J. Wyatt. Prerequisite, Course 149.

English Literature 151 Middle English 2 hrs.

Mr. Holliday. Time to be arranged.

A careful study of selections in Emerson's *Middle English Reader*.

English Literature 152 Chaucer 2 hrs.

Mr. Holliday. Time to be arranged.

Reading of *Canterbury Tales*. Language and metre of Chaucer. Grammar.

(Anglo-Saxon I is strongly recommended as a preliminary course.)

English Literature 153 Chaucer 2 hrs.

Mr. Holliday. Time to be arranged.

Canterbury Tales completed. Remaining poems of Chaucer studied with special reference to literary relations and influences. Prerequisite, Course 152.

Related Courses Offered in Other Departments.

English 135-136 The Short Story 4 hrs.

French 131-132 Romantic and Modern French Drama 6 hrs.

History 135-136 English History 6 hrs.

FRENCH.

**Professor Nurse, Associate Professor Wells
and Miss May.**

The department attempts to assist in filling the present demand for men and women who can read, write and speak the French language. This language has become the equipment for efficient work at home and abroad in many fields, and French must become and remain a means of intercourse between the English-speaking and French-speaking peoples. The new demand is for students who can understand French and express themselves clearly in this language. Methods of dead language are out of place and French must be learned as a second living language of America. By means of the direct use of the language this department aims to equip men and women for practical work. Courses for special training other than those listed will be given on sufficient demand.

Major, 36 semester hours.

Minor, 18 semester hours.

French 111-112 **Elementary French** **6 or 10 hrs.**

Mr. Nurse, Miss May, Both Semesters,

M., Tu., W., Th., F., 9 A. M., Tu., Th., 4:05-5:30 P. M.

Tu., Th., 7:05-8:30 P. M.

A course for beginners in French which aims to enable the student to pronounce, read, understand and speak simple French. Texts are the New French Grammar, Chardenal, Livre de Lecture et Conversation, Fontaine, Reux, Elementary French Reader and easy French texts.

To be offered in 1919-20.

French 121-122 **Intermediate French** **6 hrs.**

Mr. Nurse, Mr. Wells, Both Semesters.

M., W., F., 12-1 P. M., M., Th., 7-8:30 P. M.

A course in simple French literature and composition, aimed to develop fluency in speaking and ease in reading and comprehending the language. Some modern dramas and novels, as those of Verne, Rostand and Maupassant, will be read.

French 131-132 **Romantic and Modern French Drama** **6 hrs.**

Mr. Nurse, Both Semesters, M., W., F., 1-2 P. M.

A course in the reading and discussion of Romantic dramas and novels and of contemporary writers, with continued composition and conversation. The aim is to acquire a vocabulary and working knowledge of modern French.

French 141-142 **Classic and Technical French** **6 hrs.**

Mr. Nurse, Both Semesters.

Works of such writers as Hugo, Racine, Voltaire, Corneille and Moliere may be read. In connection with this study of the leading writers, attention will be given to technical and scientific French, to fit the student for technical and teaching positions.

To be offered in 1919-20.

Related Courses Offered in Other Departments.

Of the following courses twelve semester hours may be credited toward meeting the major requirements, and eight toward meeting the minor requirements of the Department of French:

Education 233-234 **Modern Education** **4 hrs.**

English Literature 143-144 **English Drama** **6 hrs.**

German 111-112 **Elementary German** **6 hrs.**

History 115-116 **General History of Europe** **6 hrs.**

Spanish 111-112 **Elementary Spanish** **6 hrs.**

Spanish 121-122 **Intermediate Spanish** **6 hrs.**

GERMAN.

Professor Nurse.

The department aims to offer work which will fill the requirements for entrance into other schools and to satisfy the

demands of technical departments of this and of other institutions.

Major, 36 semester hours.

Minor, 18 semester hours.

German 111-112 Elementary German 6 hrs.

Mr. Nurse, Both Semesters, M., W., F., 4-5:30 P. M.

A course for beginners aimed to teach the student German pronunciation and to enable him to read, write, and speak simple German. The class work is conducted in German. The course is guaranteed only to classes of at least ten students. The texts are: Erstes Jahr, Prokosch; Glueck Auf, Mueller and Wenkelbach. Simple dramas and novels.

To be offered in 1919-20.

German 131-132 Scientific German 6 hrs.

Mr. Nurse, Both Semesters, M., W., Th., 10 A. M.

This course is intended to equip the student with the ability to read technical German, such as may be demanded in his technical work while in school and after graduation. Essays will be read introducing the vocabulary and special expressions for Physics, Chemistry, Biology, Engineering, etc.

Related Courses Offered in Other Departments.

Of the following courses twelve semester hours may be credited toward meeting the major requirement, and eight hours toward meeting the minor requirements of the Department of German:

French 111-112	Elementary French	10 hrs.
French 121-122	Intermediate French	10 hrs.
Spanish 111-112	Elementary Spanish	10 hrs.
Spanish 121-122	Intermediate Spanish	10 hrs.
A more advanced course in French or Spanish		6 hrs.
English Literature 127	Romantic Movement	2 hrs.
History 125	Modern Europe	3 hrs.
Business 311	Business Administration	3 hrs.

HISTORY.

Associate Professors Bradley and Henry.

To a large extent we are creatures of environment. and environment is determined mainly by historical forces. Historical study offers an unsurpassed opportunity to secure a rational understanding of human society in its varied and complex phases. Whether one be concerned with the group as expressed in races, tribes, or nations, the sane approach to a comprehension of historical forces is usually to be found in the unchanging elements of human nature. And the same holds true if one seeks to analyze religious, social, and economic movements, or individual leadership.

The Department of History aims to vitalize historical study. It seeks to help the student acquire a saner conception of the

mestic problems, our insular possessions, foreign relations, and problems growing out of America's entrance into the war will be considered.

To be offered in 1919-20.

History 123-124 Early Modern Europe 6 hrs.

Mr. Bradley, Both Semesters, M., W., F., 8:05 A. M.

The development of national spirit, colonial expansion of Europe, military and diplomatic history of the 18th century, development of Russia, new age of liberalism, French Revolution, and the Napoleonic Wars.

Not to be offered in 1919-20.

History 126 The European Situation 3 hrs.

Mr. Bradley, Second Semester, M., W., F.

Europe since the rise of Bismarck to power in Prussia. A careful study of the background causes and early phases of the World War. Especial attention is given to the Balkan question and the problems of Western Asia.

To be offered in 1919-20.

History 131 Colonial America, 1492-1760 2 or 3 hrs.

Mr. Bradley, First Semester, Mon., 4-6 P. M.

From the first voyage of Columbus to the eve of the American Revolution. European background of American History, the growth of the various colonies, the 18th century conflict between France and England, foundations of sectionalism in America, civic and economic development of the colonies, will be featured.

To be offered in 1919-20.

History 135-136 6 hrs.

General History of England from Earliest Times to 1815.

Mr. Bradley, Both Semesters, M., W., Th., 10:05 A. M.

Special attention will be devoted to the political, constitutional, social and economic aspects of English history. Not to mention its great importance to students of American History, it is highly advisable that all who are interested in American and English literature should study English history.

Not to be offered in 1919-20.

History 137 Modern England 3 hrs.

Mr. Bradley, First Semester.

England since 1815. Every true American should be better informed as to the history of Great Britain. American political institutions are rooted in English history. And English literature constitutes the background of our own literature. Again, to study the development of the British Empire during the last hundred years, is in a sense to study world history. Moreover, the unusual and much to be desired spirit of harmony that has come to pervade the relations of Great Britain and the United States should give the American citizen a desire to know something of the history of the other great branch of the English speaking peoples comprised within the British Empire. A sound accord among the English speaking peoples indeed offers a tangible and practical basis for a league of nations.

To be offered in 1919-20.

Courses Offered by the Department of History in the College of Education.

History 235-236	Current Events	2 hrs.
Mr. Henry, Both Semesters, F., 5-6 P. M.		

Related Courses Offered in Other Departments.

Of the following courses twelve semester hours may be credited toward meeting the major, and six hours may be applied to minor requirements of the Department of History:

Economics 123-124	Principles of Economics	4 hrs.
Education 133-134	History of Modern Education	4 hrs.
English Literature 123-124		4 hrs.

Survey of English Literature

English Literature 137-138	4 hrs.
----------------------------	--------

Survey of American Literature

French 111	5 hrs.
------------	--------

Elementary French (to acquire reading knowledge)

Political Science 112	3 hrs.
-----------------------	--------

American Federal and State Government

Political Science 121	2 hrs.
-----------------------	--------

European Government and Parties

Political Science 131	Principles of Politics	3 hrs.
Psychology 111-112	Principles of Human Behavior	4 hrs.
Sociology 121	Principles of Sociology	3 hrs.

HYGIENE AND SANITATION.

Associate Professor Kline.

The Department of Hygiene and Sanitation aims to acquaint the students with the more important facts in regard to disease, attacking the problem first from the viewpoint of what his own personal susceptibility may be; and second, of what public dangers may exist, giving in each case the preventive measures commonly employed. Throughout the courses, we constantly aim to awaken in the student a sense of his social and moral responsibilities and duties regarding measures that may preserve the health of himself and his community.

Hygiene 113	Personal Hygiene	2 hrs.
-------------	------------------	--------

Mr. Kline, First Semester, Tu., Th., 8:05 A. M.

A lecture course designed to acquaint the students with the structure and function of the body both in normal condition, or health; and in abnormal condition, or disease. Taking up in order the various parts of the body and studying the structure, function and common diseases of that part with a view of impressing the student with the measures that he may take to prevent such diseases. Text: Pyles, Personal Hygiene.

To be offered in 1919-20.

Hygiene 114 Hygiene and Sanitation 2 hrs.

Mr. Kline, Second Semester, Tu., Th., 8:05 A. M.
 A continuation of Hygiene 113 with emphasis laid upon the relation of the individual to his community, studying in detail the method of supervising routes of infection for the most common diseases. Both specific methods for special diseases, and general methods, such as the supervision of water and food supplies are considered. Public health organization and work are explained and industrial hygiene is briefly considered.

Hygiene 119 Military Hygiene 3 hrs.

Mr. Kline, First Semester, Tu., Th., Sat., 9. A. M.
 A course for S. A. T. C. students. Lectures showing the cause of the chief epidemic diseases and pointing out, in each case, what measures of sanitation or prophylaxis may be taken by either Military or Civil Public Health officials to lessen the effects of that disease, in that community over which they have jurisdiction.

MATHEMATICS.

Associate Professors Brandeberry and Dowd.

The courses in Mathematics are designed to train the mind to logical forms of thought, to strengthen the powers of reasoning, and to fit the student for special work in the various industrial enterprises of the community. The courses are preparatory to the various branches of engineering, as well as for specialized work in Physics, Chemistry, and Astronomy. and students are thus enabled to enter the technical schools in these branches.

Major, 30 semester hours.

Minor, 20 semester hours

Mathematics 111 College Algebra 3 hrs.

Mr. Dowd, First Semester, M., W., F., 9:05-10 A. M.

Rapid review of fundamental operations and principles. Systems of equations; theory of quadratics, ratio and proportion; progressions; binominal theorem; logarithm; determinants; higher equations.

To be offered in 1919-20.

Mathematics 113 Plane Trigonometry 2 hrs.

Mr. Brandeberry, First Semester, Tu., Th., 11:05 A. M.

Definitions and relations regarding the six trigonometric functions. Circular measurement of angles. Logarithms and formulae, and their application to the solution of all classes of triangles. Emphasis laid on identities and trigonometric equations.

To be offered in 1919-20.

Mathematics 114 Analytical Geometry 5 hrs.

Mr. Brandeberry, Second Semester, M., Tu., W., Th., F., 11:05-12 M.

For description see Mathematics 414.

To be offered in 1919-20.

Mathematics 115 Plane Trigonometry 3 hrs.

Mr. Dowd, Either Semester, M., W., F., 10:05 A. M.

Definitions and relations of the trigonometric functions. Measurements of angles. Radians. Logarithms and formulae, and their application to the solution of all classes of triangles. Identities and trigonometric equations.

To be offered in 1919-20.

Mathematics 121 Differential Calculus 5 hrs.

Mr. Brandeberry, First Semester,

M., Tu., W., Th., F., 8:05 A. M.

Prerequisite Mathematics 111, 112 and 113. For description, see Mathematics 421.

To be offered in 1919-20.

Mathematics 122 Integral Calculus 5 hrs.

Mr. Brandeberry, Second Semester,

M., Tu., W., Th., F., 8:05 A. M.

Prerequisite Mathematics 121. For description, see Mathematics 422.

To be offered in 1919-20.

Related Courses Offered in Other Departments.

Of the following courses ten semester hours may be credited on the major requirements, and five semester hours on the minor requirements of the Department of Mathematics:

C. E. 421	Surveying and Plotting	5 hrs.
C. E. 422	Topographical Surveying	3 hrs.
C. E. 424	Railroad Surveying	4 hrs.
C. E. 531	Strength of Materials	2 hrs.
M. E. 411-12	Mechanical Drawing	5 hrs.
Physics 121-122	College Physics	10 hrs.

PHILOSOPHY.

Philosophy 121 Modern Logic 3 hrs.

Mr. Trettien, First Semester, M., W., F., 9:05 A. M.

The logical thinker is in demand in all lines of work. Most of us tend not only to make serious mistakes in our thinking, but also to be misled by fallacies of others who intentionally or unintentionally mislead us. It is the aim of this course to help the student discover and incorporate in his own thinking the principles underlying efficient thought as well as to acquaint him with the mistakes and errors commonly made in our thinking.

Offered in 1919-20.

Philosophy 122 Introduction to Philosophy 3 hrs.

All of us have been brought face to face with problems which the philosophers of this and other ages have endeavored to solve. It is the aim of this course to study some of the most important of these problems with a view to developing independent reflection and a sympathetic understanding of doctrines of the various schools of philosophic thought.

To be offered in 1919-20.

Philosophy 133-134 History of Modern Philosophy 4 hrs.

To be offered in 1919-20.

Philosophy 141-142 Ethics 4 hrs.

To be offered in 1919-20.

PHYSICAL EDUCATION.**Physical Education A and B 2 hrs.**

Section 1. Men, Y. M. C. A. Bldg.

Section 2. Women, Y. W. C. A. Bldg.

Both Semesters, Tu., 2-4 P. M.

This course includes organized gymnasium work, games, and competitive sports planned to keep the body in first-class condition.

PHYSICS.

Professor O. W. Irvin, Acting Professor Brown.

The aim of the Physics Department is to present the fundamental facts of Physics in clear, concise form; to relate these facts to the basic laws and to the theories of Physics in such a way as to render plain the historical growth of the science; and to put the student in direct touch with first-hand information concerning the epoch-making discoveries of the past upon which the growth of the science has been based, as well as to afford an intimation of the marvelous progress of the present.

Physics 121-122 College Physics 10 hrs.

Mr. Brown, Both Semesters, M., T., W., T., F., 9-10 A. M.

Wed., 9-12 M.

This is the regular course in college physics that meets the needs of the first or second year Arts and Science students. The course is presented by means of two lectures, two recitations, and one three-hour laboratory course weekly. The credit given will be five hours each semester. There is an additional requirement for those students entering without high school credits, which is one two-hour laboratory period throughout the year. This laboratory work will be the equivalent of that which accompanies Courses 1 and 2, with selected experiments from the advanced laboratory. This gives to those students who expect to teach physics in high school a knowledge of the elementary phases of the subject that necessarily must be emphasized in high school work. Text, Reed & Guthe's College Physics.

The laboratory is equipped with the latest apparatus necessary for the successful carrying out of all experiments as given in the revised edition of Millikan, Gale, and Bishop's Laboratory Manual, as well as all apparatus for the more advanced courses as given by Millikan's Mechanics, Molecular Physics, and Heat; also Millikan and Mills' Electricity, Sound and Light.

To be offered in 1919-20.

Courses Offered in the College of Industrial Science.

Physics 421	Mechanics and Heat	5 hrs.
Physics 422	Electricity and Light	5 hrs.
Physics 423-424	Physical Laboratory	2 hrs.

POLITICAL SCIENCE.

Professor Leiserson, Associate Professors Bradley and Dowd.

The Courses offered by the Department of Political Science are intended to serve three main purposes:

1. To train the student for citizenship in an American community;

2. To continue that training to meet the special needs of those who are preparing to enter the Public Service;

3. To fit students for scholarly and scientific research in the field of Government and Politics.

In the Junior College courses and in the evening classes the aim is primarily to accomplish the first purpose. Every person, whatever his business or occupation, ought to have a knowledge of the American system of government, the rights and duties of citizens and the important political problems of the day. An interest in and understanding of public affairs should be a part of every liberal education, and are particularly necessary for those intending to enter the legal profession. The processes of government and its relation to business and to labor are equally important to the business man and the wage-earner, in view of the modern tendency toward government control of industry and economic and social conditions.

The second and third purposes are intended to be accomplished by the courses in the Senior College. Experts are increasingly in demand in the public service, and in co-operation with the College of Commerce and the College of Industrial Science, the student is offered opportunities to prepare himself for the technical and business branches as well as for the purely political departments of the service. The University's Municipal Reference and Research Bureau offers an excellent laboratory for students of the department.

All the courses aim to train the powers of observation and reasoning, to develop correct methods of acquiring and testing information, and to bring the knowledge thus gained to bear in a practical way upon the solution of political problems of the day.

Major, 30 semester hours.

Minor, 15 semester hours.

Political Science 111 Municipal Government 2 hrs.

Mr. Fortney, First Semester, Tu., Th., 10:05 A. M.

Conditions and development of city life. Social groupings, problems of health, industry, and government, and the attempts to solve them. Organization and administration of city government. Municipal politics. Finance and taxation. Public Services, regulation, control and municipal ownership of public utilities.

Political Science 112 American Government 2 hrs.

Mr. Dowd, Second Semester, Tu., Th., 10:05 A. M.

A general study of the American system of government. Political parties, political issues, national and local politics. Taxation and finance, regulation of commerce and business, protection of labor. Constitutional basis of personal and property rights.

Political Science 121 State Government 2 hrs.

First Semester, Tu., Th., 9:05 A. M.

A study of the organization, powers and activities of the state governments of the United States.

To be offered in 1919-20.

Political Science 122 European Governments and Parties 2 hrs.

Mr. Leiserson, Second Semester, Tu., Th., 9:05 A. M.

Survey of the systems of government in the principal countries of Europe. Nature and functions of European political parties. Current political questions.

To be offered in 1919-20.

Political Science 131 Principles of Political Science 3 hrs.

General survey of field of political science. Original forms and functions of the state. Development of political thought. Constitutional law, liberty, sovereignty, justice, legislation, the suffrage.

Political Science 145 International Law 3 hrs.

Mr. Bradley, First Semester, M., W., F., 11:05 A. M.

The law of nations. A study of the leading principles of international law, functions of state, conflicting rights, neutrality, law of war, diplomatic intercourse, rights and duties of consuls and ambassadors, treaties, and treaty-making powers are some of the subjects treated. Special attention will be given to many cases during the recent war which involved a direct application of international law. Also, the recently formed league of nations will be studied from the standpoint of legal justification and practicability.

Political Science 146 History of American Diplomacy 2 or 3 hrs.

Mr. Bradley, Second Semester, M., W., F., 11:05 A. M.

History of American diplomacy, with special reference to the diplomacy of the Great War. This course logically follows In-

ternational Law, although it is open to any student who is keenly interested in American History. While the subject matter treated in this course is of interest, the history of our diplomacy gives a peculiarly valuable insight into American history. Probably no better means of interpreting history can be found than through the careful study of diplomacy.

To be offered in 1919-20.

Political Science 159a and 159b Public Service Practice

2 to 4 hrs.

Mr. Johnson. Time to be arranged.

Detailed studies of special problems assigned for individual investigations. The work is done under direction of the University Municipal Reference and Research Bureau, and opportunities may be afforded to students to work directly in connection with city departments. Seminar and conferences to discuss methods and results of investigations.

Related Courses Offered in Other Departments.

Of the following courses twelve semester hours may be credited toward meeting either major or minor requirements of the Department of Political Science:

Economics 123	Principles of Economics	3 hrs.
Economics 124	Principles of Economics	3 hrs.
Economics 133	Labor Problems	2 hrs.
Economics 136	Statistical Theory and Method	2 hrs.
Economics 143	Industrial Combinations	2 hrs.
Economics 144	History of Economic Thought	2 hrs.
Banking 321	Money and Currency	2 hrs.
Banking 331	Banking Principles	2 hrs.
History 111	Modern European History	3 hrs.
Law 613	Elementary Law	2 hrs.
Law 646	Constitutional Law	2 hrs.
Sociology 111	Introduction to the Social Sciences	3 hrs.
Business Law		6 hrs.

PSYCHOLOGY.

Professor Trettien and Associate Professor Henry.

The work in the Department of Psychology has been organized to meet a twofold need of the community. It serves, first, as a teaching department in the University; and, second, as a psychological research laboratory and clinic.

Three types of courses have been organized: (1) The general and more elementary courses in the study of human behavior and principles are designed to familiarize the student with the general scope and methods in the field of psychology as related to everyday life. (2) The courses that are designed to acquaint the student with the laboratory technique and practice, and the systems of tests and mental measurements that have been devised to determine the plane of mentality and the degree of efficiency or abnormal mentality according to established

Norms. (3) The courses of a more advanced nature in applied psychology and research. During the following year research work will be directed along the lines of efficiency and control, speech defects, and problems of criminal psychology.

The Psychology Department is housed in the Science Building, corner of Cherry and Page streets. It occupies five rooms on the first floor, consisting of lecture room, laboratory, child clinic, research room, and office.

The laboratory is equipped with the standard apparatus for making the various mental tests and psycho-physical examinations in the fields of educational, criminal and business psychology. Facilities are offered for the study and investigation of special psychological problems of a personal, social or industrial nature.

Major, 36 semester hours.

Minor, 18 semester hours.

Psychology 113-114 Elementary Psychology 4 hrs.

Mr. Trettien, Both Semesters, M., 7-9 P. M.

An introductory course designed to give the student an insight into the general field of consciousness as a factor in every day life and conduct.

To be offered in 1919-20.

Psychology 121 Principles of Psychology 2 hrs.

Mr. Trettien, First Semester, M., W., 10 A. M.

The course aims to present in a systematic way the facts and principles of psychology.

To be offered in 1919-20.

Psychology 123 Elementary Experimental Psychology 1 hr.

Mr. Trettien, First Semester, F., 1:30-3 P. M.

The course is designed to familiarize the student with psychological apparatus, methods of procedure and interpretation of results of experimentation. It supplements Course 121 and should be taken with it.

To be offered in 1919-20.

Psychology 131-132 Mental Tests and Measurements 4 hrs.

Mr. Trettien, Both Semesters, W., 4-6 P. M.

A study of the standard tests and measurements will be made, and the application in the testing of senses, perception, attention, imagery, association, reasoning, emotional and motor control and fatigue. No credit will be given for one semester of work.

To be offered in 1919-20.

Psychology 142 Genetic Psychology 2 hrs.

Mr. Trettien, Second Semester, Th., 4-6 P. M.

The course aims to trace the fundamental principles of mental growth and development of the child and the race from infancy to maturity.

Not to be offered in 1919-20.

Psychology 143-144 Clinical Psychology 4 hrs.**Mr. Trettien, Both Semesters, S., 10-12 M.**

This course will present the various methods and principles of Psycho-physical analysis and will apply these to the study of normal, subnormal, exceptional and delinquent children. Practical work is done in connection with the city life.
To be offered in 1919-20.

Psychology 146 Psychology of the Emotions 2 hrs.**Mr. Trettien, Second Semester, Th., 4-6 P. M.**

A study of the nature and function of the instincts, feelings and emotions as they affect traits, temperaments and modes of human experience will be made.
To be offered in 1919-20.

Psychology 147-148 Psychology of Character Analysis 4 hrs.**Mr. Trettien, Both Semesters, Fri., 7:15-8:15 P. M.**

The fundamental elements and types of human character will be studied. Various systems of character study will be analyzed with practical applications.
To be offered in 1919-20.

Psychology 159a & b Seminar 2 to 4 hrs.

The seminar is open to senior and graduate students who desire to investigate specific psychological problems. Hours to be arranged.

Courses Offered in Other Colleges.**Psychology 231-232 Principles of Psychology 4 hrs.****Psychology 233 Educational Psychology 2 hrs.****Psychology 235-236 Adolescence 4 hrs.****Psychology 242 Genetic Psychology 2 hrs.****Psychology 321-322 Psychology of Efficiency and Control 4 hrs.****Related Courses in Other Departments.****Elementary Education 232 Child Study 4 hrs.****SOCIOLOGY.****Acting Professor Will.**

The primary aim of the Department of Sociology is the scientific analysis and interpretation of human association as a condition of the realization of values by mankind. The advancement of civilization increasingly involves the population of the whole earth in a complication of social relations of the most intricate character. More and more the trained intellect is to be called on to work out solutions for the problems which these complications raise. The training of our students for responsible participation in the vocation of citizenship and the training of experts competent to engineer social enterprises are the tasks which we assume. In the presentation of courses, both the

theoretical and practical aspects of problems are duly weighed. The method of instruction includes lectures, assigned readings, discussions, oral and written quizzes, and criticism of original investigations. The rapidly growing city of Toledo with its industrial, philanthropic, religious, political, educational, and recreational institutions, together with a highly composite population, offers the students of sociology laboratory facilities of a very superior sort.

Major, 30 semester hours.

Minor, 15 semester hours.

Sociology 111 Introduction to the Social Sciences 3 hrs.

Mr. Will, First Semester, M., W., F., 11:05 A. M.

The aim of this course is to present to the beginner the natural science point of view in its application to social realities, and to give him a working knowledge of the elementary principles underlying all forms of human association. This course is fundamental to the understanding of sociology, economics, and political science. Open to junior college students.

Sociology 112 Applied Sociology 3 hrs.

Mr. Will, Second Semester, M., W., F., 11:05 A. M.

This course is intended to introduce the student to the study of practical social problems, including crime, poverty, marriage, public health, the city, country life, and recreation. Prerequisite 111.

To be offered in 1919-20.

Sociology 121 General Sociology 2 hrs.

Mr. Will, First Semester, M., W., 10:05 A. M.

In this course the aim is to present a survey of the whole field of sociology, particular emphasis being given to the contributions of American scholars. The concepts developed are: physical sociology, social behavior, social control, social unity, social evolution, and social progress. Arranged for senior college students who have had no previous instruction in sociology.

To be offered in 1919-20.

Sociology 124 Social Organization 2 hrs.

Mr. Will, Second Semester, M., W., 10:05 A. M.

The problem of organizing society to promote human welfare is taken up in detail in this course, and the functions and activities of the major institutions affecting social organization are critically examined. This includes the municipality, the school, the church, social centers and social settlements, welfare departments, and playgrounds. Open to senior college students. Prerequisite, course 121.

To be offered in 1919-20.

Sociology 135 Population and the Family 2 hrs.

Mr. Will, First Semester.

Some of the problems of this course are: neo-malthusian doctrine, race suicide, ancient and modern marital institutions, standards of living, rights of women and children, divorce, and the control of vice.

To be offered in 1919-20.

Sociology 136**The Community****2 hrs.****Mr. Will, Second Semester.**

The development of this course will proceed under three general heads: (1) growth, or the evolution of the community from the primitive village to the modern metropolis; (2) attitudes, or the differentiation of the social mind of the community; (3) organization, or planning the development of the community. To be offered in 1919-20.

Sociology 143**Criminology****2 hrs.****Mr. Will, First Semester.**

Criminology investigates the problem of anti-social conduct; that is, the active violation of fundamental moral obligations by individuals. Crime is treated, in part, as a product of the objective social environment, and, in part, as a product of the subjective individual constitution. Special attention is given to first offense and juvenile delinquency. A theory of the social treatment of crime is developed. To be offered in 1920-21.

Sociology 144**Social Order****2 hrs.****Mr. Will, Second Semester.**

The elements of association, the significance of communication, the crowd and the mob, competition and co-operation, radicalism and conservatism as types of disorder; the nature of peace and war, and order in relation to progress are important concepts presented. To be offered in 1920-21.

Sociology 159a and b Sociological Research**3 to 5 hrs.****Mr. Will, Both Semesters.**

This course has been arranged to meet the needs of students interested in pursuing the original investigation of social problems. It will include training in scientific method, preparation of bibliographies, lectures, assigned readings, and conferences. The preparation of a thesis, giving a full account of method of investigation and findings, is required.

Related Courses Offered in Other Departments.

Of the following courses twelve semester hours may be credited toward meeting the major requirements and five semester hours toward meeting the minor requirements of the Department of Sociology:

Accounting 331-332 Elementary Accounting **6 hrs.**

Business Administration 311 **2 hrs**

Business Organization and Management

Economics 123 Principles of Economics **3 hrs.**

Economics 133 Labor Problems **2 hrs.**

Economics 311-312 Introduction to Economics **6 hrs.**

Education 111 Principles of Human Behavior **2 hrs.**

Education 247-248 Social Education **4 hrs.**

Political Science 111	Municipal Government	3 hrs.
Political Science 112	American Government	3 hrs.
Political Science 131	Principles of Politics	3 hrs.

SPANISH.

Professor Nurse and Associate Professor Wells.

The Department will attempt in two years to develop a fluency in speaking and an accuracy in reading and writing Spanish. Special attention will be given to two types of students: those interested in literature, and those interested in the business and commercial language and who are fitting themselves for commercial and government positions.

Major, 36 semester hours.

Minor, 18 semester hours.

Spanish 111-112 Elementary Spanish 10 to 6 hrs.

Mr. Wells, Both Semesters, M., Tu., W., Th., F., 9 A. M.

This course is aimed to teach the student Spanish pronunciation and Grammar and to enable him to read, write and speak simple Spanish. A direct method is employed and Spanish is spoken from the first. The texts are Spanish Grammar, Hilles and Ford. Elementary Reader, Harrison; *Espana Pintoresca*, Dorado.

To be offered in 1919-20.

Spanish 121-122 Intermediate Spanish 6 hrs.

Mr. Wells, Both Semesters, M., W., F., 3:05 P. M.

A course in the literature of Spain and South America; and composition in business forms, letter writing and commercial language. In this course will be read modern dramas and novels from the works of Valdes, Echeguary, Ibanez, Valera, etc. Texts used, among others, will be Harrison's Intermediate Reader, and Commercial Reader.

To be offered in 1919-20.

Spanish 131-132 Literary and Technical Spanish 6 hrs.

Mr. Wells, Both Semesters, Tu., Th., 4:05-5:30 P. M.

A course in the literature of Spain and South America combined with technical studies of the scientific language, history and geography of Spanish American countries and provinces. This course is designed to prepare students for commercial, diplomatic, and teaching positions.

To be offered in 1919-20.

Related Courses Offered in Other Departments.

Of the following courses twelve semester hours may be credited toward meeting the major requirements and six semester hours toward meeting the minor requirements of the Department of Spanish:

Commerce 312	Business Administration	3 hrs.
English Literature 143-144	English Drama	6 hrs.

French 111	Elementary French	6 hrs.
French 112	Intermediate French	6 hrs.
German 111-112	Elementary German	6 hrs.
A More Advanced Course in French and German		6 hrs.
History 231-232	Modern European History	4 hrs.

REGISTER OF COLLEGE OF ARTS AND SCIENCE STUDENTS

1918-1919

FIRST SEMESTER

List of Regular Students*

Semester Hours†	Semester Hours†
Allan, Ruth R..... 3	Brunson, Louise P.....12
Allebach, Francis M..... 3	Bruyere, Helen B..... 2
Anderson, Clarice K.....19	Bruyere, Louis U. 2
Anderson, Isabel .....17	Buckhout, D. H..... 2
Applegate, Clarence J.....16	Buehler, Harold .....21
Aufderheide, Elizabeth 1	Burchfield, Laverne .. 3
Babcock, A. Doyle.....17	Campbell, Ellen M. 3
Ballmer, Perry A.....13	Canniff, Maude M..... 6
Bamberger, Esther C.....19	Carr, Sarah E. 8
Beck, Esther .....19	Cartwright, Jane 2
Beck, Josephine .. 3	Coder, Edith M..... 3
Beck, Luella .....19	Coehrs, Theresa M..... 9
Beebe, Dorcas S..... 6	Collins, Stella .. 3
Bell, Minnie 2	Coover, J. Weir..... 1
Benster, Ollienna K..... 5	Crannell, Lucy D..... 3
Bihl, Anna C.....18	Cunningham, Henrietta C.... 2
Binzer, Royal B.....18	.
Blasey, Elvena .. 3	Dancer, C. Wayne .....13
Bodette, Margaret M..... 3	Dean, Emma .. 3
Boughton, Helene I.....13	Dean, Martha L..... 3
Bramwell, Anne M. 3	Denison, Mabel F. 3
Bramwell, Emily .. 3	Depenthal, Carolyn L. 3
Bray, Ruth E.....16	DeVore, Eva E. 3
Briehl, Martin .....18	Dildine, Helen G..... 3
Brown, Jessie C.....14	Dreyer, Alberta .....18
Brown, Russell G. ....19	Duer, Margaret E.....16

*Regular students are students who have been graduated from first grade four-year high schools or from secondary schools with equally high standards.

† Semester hours enrolled first semester.

	Semester Hours†		Semester Hours†
Eberth, Aillen B.....	13	Katz, Philip	21
Eiselstein, G. L.	1	Ketcham, Helen Geddes.....	15
Ellis, Florence G.....	3	Klebsattel, Aug.	12
Ellis, Ruth F.....	3	Knabenshue, E.	3
Ely, Gilbert C.....	11	Knight, Susan M.....	5
		Knights, Maude D.....	6
Faben, Richard R.	17		
Ferguson, Maud E.....	2	Lahrman, Alice	3
Fitzgerald, Dean J.....	11	Landis, Florenze M.....	3
Flanigan, Minnie	15	Landis, Mrs. Lorin R.....	3
Fox, Anna E.	3	Lehman, George D.....	2
Fries, Ethel M.....	3	Lehman, P. D.....	4
		Levy, Ethel	18
Gardiner, Antoinette S.....	2	Levy, Goldye ..	6
Gardiner, Dr. John.....	7	Levy, Mollie H.	16
Gardiner, R. J.....	2	Lewis, Mabel	2
Gates, Josephine S.....	2	Littleton, Dwight	13
Geiner, Hazel Dorothy	19	Long, Edna L.	1
Gernhardt, Ralph	16	Long, Grace B.....	14
Gillham, Beatrice	13	Lutton, Florence	5
Gilmartin, Elizabeth C.....	3	Lynch, Mrs. E. L.....	6
Goetz, Naomi	2		
Gorman, Nan	19	Maginnis, Marjorie ..	3
Goulet, Alma E.....	3	Mapes, June	2
Gruendyke, Arthur M.....	16	Mapes, Margaret ..	18
Gruver, Marian A.....	7	Marine, Lucile	3
		Marshall, Jessica	5
Harroun, R. Geo.	13	Materny, Steven, Jr.....	20
Hart, Marion C.....	19	McKendry, Margaret	17
Hartshorn, Ola M.....	18	Meffley, Robt. J. W.....	7
Harvey, Carlyle L.....	16	Menold, Helene J.	15
Hill, Ruth	2	Metcalf, Edith	1
Hirth, Elaine	1	Miehls, Alberta	15
Howard, Kenneth R.....	14	Miller, Dorothy E.....	17
Huber, Karl J.	10	Mills, Herold C.	14
Hurlbut, Margaret	3	Mitchell, Nellie	3
Hutchison, Mary H.....	3	Morgan, Elizabeth	4
		Morse, Myrtle W.....	2
Irving, Elizabeth M.....	2	Morse, Terrell E.....	2
		Munson, Harriet E.....	3
Jackson, Alta ..	5		
Jillson, O. B.	1	Nagelbrecher, G. J.....	16
Johnston, Marjorie	6	Nathan, Regina	3
Juchhoff, Edna Z.....	19	Nuneviller, Ruth L.....	18
Junkins, S. R.....	17		

	Semester Hours†		Semester Hours†
Peck, Marguerite M.....	3	Sugrue, John	13
Pittenger, Clarke	13	Summer, Christine	2
Potter, Isabel R.....	1		
Pray, Louise	2	Taylor, Jessie S.....	5
		Thal, Theodore ..	17
Queenen, Estella	3	Thomson, Jean E.....	6
Quinn, Aurelia E.....	6	Tippett, A. Louise.....	3
		Tucker, Robert B.....	10
Radcliffe, Myara M.....	6		
Refior, Sophia	3	Ulen, Dorothy	15
Reid, Harold P.....	19		
Rhoades, S. M.	1	Van de Water, Myrtle.....	3
Ritter, Elsie E.....	6	Van Gorder, Claire	18
Roach, Felix J.....	14	Van Gorder, William P.....	10
Rodman, Frank	17		
Roper, Andrew E.....	13	Wager, Juliet A.....	4
		Wager, Lorna J.....	4
Sallume, Najib N.	1	Wall, Richard J.....	17
Scherff, Anna	2	Walls, Lunetta A.....	3
Schulte, Louise E.....	18	Weber, Karl	14
Shinbach, Samuel	15	Wechtel, George F.....	17
Skampo, Mrs. Lucile.....	3	Weisz, Albert B.....	4
Skilliter, Robert T.....	16	Weyant, John P.....	1
Smith, Herbert C.....	18	Whiteford, Marion C.....	8
Sprague, Florence	2	Willoughby, Ethel C.....	5
Spring, Marshall M.....	17	Wilson, Marjorie	3
Stock, Helen E.....	5	Wing, Wallace	15
Strachan, Emily ..	5	Wolverton, M. F.....	4
Streeter, Howard ..	13	Wright, Amy L.....	20
Stuart, A. W.....	1	Wright, Jeannette ..	1

List of Special Students*

Ackerman, Lola	Beckwith, Hazel
Adams, Mrs. Mary E.	Behrens, Helen S. C.
Albrecht, Leone V.	Benner, Claude L.
Alexander, Margaret	Bernard, Mrs. Florence M.
Ashley, Margaret	Best, Florence
	Biederman, Sophia
Barger, Sue	Bitter, W. J.
Barkdull, Helen	Bittman, Marie
Bay, Anthony C.	Bliss, D. W.
Bayer, Bertha	Bolinger, John
Beckman, Louis, Jr.	Bradley, W. Frank
	Broer, Elizabeth

Burgie, Elfrieda D.
Burgie, Ruth
Burner, Irene M.

Campbell, Mrs. Clara
Chisholm, W. J.
Christman, Louise
Clark, Roy A.
Conkle, F. B.
Conlin, Genevieve
Cowdin, Mrs. H. E.

Daly, Frank R.
Deister, Wm. C.
DeMuth, Leota E.
Doan, Charles E.
Doan, E. Natelle
Donoher, Thomas E.

Ecker, Mrs. Herman

Files, C. J.
France, Miles D.
Gettins, George F.
Hamilton, Ethel B.
Hammersmith, Frances
Handenschild, H.
Hardee, Florence
Harrison, Leah
Harrison, Sarah
Harter, Herold M.
Heiner, H. B.
Heinle, Lawrence A.
Hofer, Ida F.
Howe, Clark D.
Howell, Mary E.
Hunter, Chas. W.

Kievits, Susie M.
Kilstein, Rose
Kilstein, Sarah
King, Bessie F.
Kirk, Charles N.

Knierim, Dora L.
Kopitke, Otto F.

LaFrance, F. E.
Lamb, George P.
Lamb, Harry D.
Landis, Lorena
Lee, Nelle C.
Leflet, Herma E.
Lehman, Paul
Levy, Goldye N.
Lewis, F. B.
Long, B. J.
Long, Frances
Lorenz, Carl H.
Lucas, Frank L.
Lynch, Nella

McFarland, J. H.
McHenry, C. S.
Magee, Ruth
Meyer, Mrs. Edith M.
Montgomery, Nell I.
Morley, Helen
Moroski, Rosalie
Moss, Mrs. Marie
Muhme, Corra
Muhme, Florence
Myers, Belle

Nauts, Virginia B.
Nelson, Margaret S.
Nold, Helen Johnston

O'Dwyer, Margaret
O'Neil, Margaret
Owen, Harry R.

Parisky, Mrs. Grace
Porter, Esther
Powell, Victoria

Quinn, Ellene
Quinn, Leora F.

*Special students are students who are not graduates of standard four-year high schools or have not indicated the fact that they are graduates of such institutions.

Rabbe, O. F.
 Richards, Vernon K.
 Robinson, Florence
 Robinson, Ruby
 Roeder, Mary L.
 Rogers, Judson G.
 Rosevear, H. Allen
 Roush, E. E.

Sanger, Josephine
 Schilling, Mrs. M. B.
 Schliessner, Verna
 Schliessner, W. H.
 Schnapp, Eva
 Schulte, Winifred L.
 Smith, Jeanette
 Snow, Emma B.
 Spencer, Gertrude B.
 Sprague, Gertrude A.
 Spring, Alva L.
 Stebbins, Edith A.
 Stegstra, Tracie
 Stephens, Ben L.
 Sullivan, Alma R.

Taw, Gee
 Toothman, R.
 Tripp, Donald W.

Tuttle, George H.
 VanAarle, Margaret
 VanTine, C. H.
 Vogt, J. Vera
 Vrooman, Seaman G.

Waldruff, Lulu E.
 Wales, Wm. W.
 Walker, Esther E.
 Walker, Mercedes C.
 Watson, Clement W.
 Wearer, Albert D.
 Webber, F. X.
 Weber, Elizabeth
 Webster, Edythe A.
 Weimar, Ottillia E.
 Willard, Homer E.
 Willey, Howard J.
 Williams, Clarence D.
 Williams, Frank M., Jr.
 Wilson, Manette
 Wiltsie, Ray B.
 Wise, Selma

Zbinden, Mrs. Theo.
 Ziegler, Mrs. Mary
 Zietlow, Alma
 Zink, Augusta A.

SECOND SEMESTER

List of Regular and Special Students*

Abbeglen, Edith
 Agler, Claudine A.
 Albrecht, Leone V.
 Allan, Ruth R.
 Allebach, Francis M.
 Anderson, Clarice
 Anderson, Isabel
 Andrus, Frank
 Arndt, Alexander J.
 Aufderheide, Elizabeth M.
 Austin, Coralie

Bamberger, Esther C.
 Bartasek, Steve

Bartos, Fred
 Bay, A. C.
 Bay, George H.
 Beck, Esther
 Beck, Luella
 Beck, Josephine
 Beman, Glen E.
 Benner, Claude L.
 Berger, Harold B.
 Bernard, Florence S.
 Bittman, Marie
 Blanchard, Marie Cochran
 Blasey, Elvena
 Bliss, D. W.

Bolinger, John
Boughton, Helene I.
Bovery, Mrs. Mabel A.
Bracker, Gertrude
Bradley, Ruth E.
Bradley, W. Frank
Bramwell, Anne M.
Bramwell, Emily M.
Brannon, Warren E.
Bray, Ruth E.
Bremer, Max E.
Brown, Mrs. C. W.
Brown, Jessie Carola
Brown, Russell G. C.
Browne, Ethel
Brunson, Louise Plum
Bruyere, Helen B.
Bruyere, Louis U.
Bryan, C. E.
Buehler, Harold
Burgie, Ruth
Burner, Verne M.
Bush, Elizabeth P.
Butler, Elizabeth K.

Caldwell, Alta H.
Campbell, Mrs. Clara B.
Campbell, Ellen M.
Canniff, Maud M.
Carr, Sarah E.
Cartwright, Jane M.
Chollett, Flora
Christman, Louise
Cobe, Mrs. Adele F.
Coder, Edith M.
Coehrs, Theresa
Collins, Stella
Commager, Anna
Conkle, Frank B.
Corlett, Louise
Cramer, Olive L.
Cunningham, Henrietta C.

Dale, Lillian
Daly, Frank R.

Dancer, C. Wayne
Davies, Arthur W.
Dean, Alice R.
Dean, Martha L.
Dean, Natelle E.
DeFars, Leonard
Depenthal, Carolyn L.
Diamond, Jacob
Dickerson, Francis A.
Dickinson, Charles R.
Dildine, Helen G.
Drlik, Paul
Duer, Margaret E.

Eastin, Robert C.
Ecker, Mrs. Herman
Elbert, Carlos
Ely, Gilbert C.
Emerson, F. Eva
Faben, R. R.
Faunce, C. E.
Ferguson, Maude E.
Files, Clark J.
Fitzpatrick, Nora A.
Flanigan, Minnie
Fortney, Helen S.
France, Gertrude
Freed, Loring
Friede, Henry
Froh, Mary

Gardiner, Mrs. John
Gardiner, Dr. John
Gardner, Roy J.
Gates, Florence A.
Gates, Josephine Scribner
Geiner, Hazel D.
Gilbert, Gladys L.
Gillham, Beatrice
Goetz, Naomi
Gorman, Katherine J.
Gorman, Margaret G.
Gorman, Nan J.
Gould, Elsie E.
Gould, Selma H.

* Enrolled up to March 1, 1919.

Graves, Arthur J.
Griffith, Marguerite F.
Gruver, Marian A.
Guese, Marie J.

Handenschild, Harry
Hagemeyer, Earl W.
Hammersmith, Frances
Harbaugh, Jas. W.
Harbaugh, Mrs. J. W.
Harrison, Leah
Harrison, Sarah
Harroun, R. George
Hart, Marion C.
Harter, Herold M.
Hartshorn, Ola M.
Harvey, Carlyle L.
Hasey, Mrs. Willard H.
Hayward, A. G.
Heinle, Laurence A.
Hejtmanek, John
Henney, J. K.
Hirth, Elaine
Hite, David W.
Hofer, Ida F.
Hoffman, Viola
Howard, Kenneth R.
Howe, Clark D.
Horton, Mrs. Katherine B.
Howard, Lulu F.
Howell, A. Llewelyn
Hoyt, Helen E.
Huber, Karl I.
Hutchison, Mary H.

Jennings, Marie A.
Jennings, Ralph W.
Johnston, M. Marjorie
Juchhoff, Edna Z.
June, Dalton R.

Katz, Philip
Keller, Arthur G.
Kelly, Jack H.
Kelly, Ruth E.
Kern, Evelyn B.
Ketcham, Helen G.
Kievit, Susie M.

Kilstein, Rose
Kilstein, Sarah
King, Bessie
Kitchen, Louise
Klebsattel, August
Knapp, Peter R.
Knight, Susan M.
Knights, Maude D.
Kolbe, Alma
Krsal, Method

LaFrance, F. E.
Lahrman, Alice
Lamb, Harry D.
Lamb, George
Landis, Leona
LaPoint, Max J.
Lee, Nelle C.
Leflet, Herma
Lehmann, George D.
Leinaweaver, L.
Lewis, Ethlyn C.
Levy, Ethel
Levy, Goldye
Levy, Goldye N.
Levy, Mollie H.
Lipps, William L.
Long, Grace B.
Lowe, Ruth F.
Lucas, F. L.
Lutton, Florence
Lynch, Mrs. Eloise
Lynch, Nella

Mapes, June
Mapes, Margaret W.
Marine, Lucile
Marshall, Jessica
Martin, Margaret E.
Mascho, Mrs. Chas. W.
Materny, Steven, Jr.
May, Virginia C.
McHenry, C. S.
McKechnie, Herbert D.
McKendry, Margaret
McNary, Carrie
Meffley, Robert J. W.
Menold, Helene J.

Meyer, Edith M.
Micka, Thomas
Miehls, Alberta
Miller, Dorothy
Miller, Theodora A.
Mitacek, Jacob
Mitchell, George
Mitchell, Nellie
Mollenkopf, Mrs. Ella
Montgomery, Nell I.
Morgan, Elizabeth
Morgan, Mrs. Florence
Morley, Helen
Morse, Myrtle W.
Morse, Terrell E.
Moss, Marie
Muhme, Corra
Muhme, Florence

Nathan, Regina
Nauts, Alice C.
Nauts, Virginia B.
Nelson, Margaret
Nold, Helen J.
Nuneviller, Marie C.
Nuneviller, Ruth L.

O'Neil, Margaret
Ott, Emmalyn C.
Owen, Harry R.

Parisky, Grace
Pfefferle, Charles F.
Plotkin, Minna
Posey, Lester
Potter, Isabel R.
Potter, Burton H.
Powell, Victoria
Pray, Louise
Price, Beth

Quinn, Leora

Rabbe, O. F.
Radcliffe, Myara M.
Ranfel, Anton
Rasmussen, Max
Refior, Sophia R.

Reid, Harold R.
Reinhart, Geneva
Repasz, H. E.
Repasz, Mrs. H. E.
Richards, Vernon K.
Robinson, Gertrude
Roper, Andrew E.
Rosenkrans, Floyd M.
Rosenthal, Robert B.
Royer, Charles H.
Rupp, Walding G.

Scharbach, Gladys E.
Scherff, Anna
Schelling, Marie B.
Schlisser, Verna
Schnapp, Eva
Schulte, Louise E.
Schulte, Winifred
Schwartz, Anna H.
Sevelam, Fred
Shalet, Charles
Shapiro, Goldye N.
Shinbach, Samuel
Shreffler, Ethel N.
Shreffler, James E.
Simon, Victor E.
Skampo, Mrs. H. A.
Slezak, Joe
Smedley, Julian A.
Smith, Helen V.
Smith, Herbert C.
Smith, Mrs. Oscar J.
Snow, Emma B.
Snyder, Charles
Spahr, Jessie B.
Spilker, Edna L.
Sprague, Florence
Sprague, Gertrude A.
Stahl, George S.
Stanec, Steve
Stebbins, Edith
Steinem, Leo
Stephens, Ben L.
Stephens, Mary D.
Stock, Helen E.
Stone, Lois A.
Strachan, Emily

Sugrue, John D.
Sullivan, Alma R.

Taw, Gee
Taylor, Jessie S.
Taylor, Mona D.
Tippett, A. Louise
Titus, Anna
Tomesek, Paul
Tracey, Olive S.
Trattles, Helen M.
Tripp, Donald W.
Truax, Mrs. Ottilie
Tucker, Robert B.

Ulen, Dorothy O.

Van de Water, Myrtle
Van Gorder, Claire
Van Gorder, William P.
Van Tine, C. H.
Vlach, John

Wachter, Mary
Wagar, Juliet
Wagar, Lorna
Waldruff, Lulu E.
Wales, W. W.
Walls, Lunetta
Watson, C. W.
Weaver, Albert D.
Webber, Frank X.
Webster, Edythe A.
Weisz, Albert B.
Wenner, Ralph S.
Weyant, John P.
Whiteford, Marian
Whitney, Herbert P.
Whitney, Louise
Willard, Homer E.
Williams, Frank
Willis, Mrs. Mary I.
Willoughby, Ethel C.
Wiseman, Mrs. Helen
Wolverton, Mrs. F.

Woodruff, William L.
Wone, Gee
Wright, Amy L.
Wright, Mrs. J.

Zbinden, Mrs. Theodore
Zietlow, Alma

THE COLLEGE
OF
EDUCATION



Announcements
1919 - 1920
CATALOG
1918 - 1919

THE FACULTY.

A. MONROE STOWE, A.M., Ph.D.

908 Prospect Ave.

President of the University and Professor of Education.

Ph.B., 1903, A.M., 1904, Northwestern University; A. M., 1905, Harvard University; Ph.D., 1909, Columbia University. Instructor in Mathematics, Academy of Northwestern University, 1903-1904; Principal of Center School, Darien, Conn., 1906-1907; Principal, Training School, State Normal School, Hyannis, Mass., 1907-1909. Professor of the History and Philosophy of Education, Collegiate Department, State Normal School, Emporia, Kansas, 1909-1912; Supervisor of Practice, State Normal School, Whitewater, Wis., 1912-1913; Acting Professor of Education and Psychology, DePauw University, Greencastle, Ind., 1913-1914; Professor of Education and Acting President, Toledo University, 1914-1915; Professor of Education and President, Toledo University, 1915—

FRANK U. QUILLIN, A.B., A.M., Ph.D.

1460 W. Delaware Ave.

Acting Dean and Professor of Educational Sociology.

A.B., Ohio Wesleyan University, 1903; A.M., Harvard University, 1905; Ph.D., University of Michigan, 1910. Teacher of Latin, Portsmouth, Ohio, High School, 1903-4; of History in Boys' Preparatory School, Winona Lake, Indiana, 1905-6. Principal of High School at Ypsilanti, Mich., 1906-12. Professor and head of the Department of Economics and Sociology at Knox College, Galesburg, Ill., 1912-17. Associate Professor of Business Administration, Toledo University, 1917-18; Director of Summer School of Toledo University, 1918; Professor of Business Administration; Professor of Educational Sociology; Acting Dean of Teachers' College, Toledo University, 1918—

A. W. TRETTEIN, A.B., Ph.D.

2208 Rosewood Ave.

Professor of Psychology.

State Normal School, School Diploma, 1894, Oshkosh, Wis.; B.L., University of Wisconsin; Ph.D., 1904, Clark University; Supervising Principal of Schools, Appleton, Wis., 1894-1897; Professor of Psychology and Education, State Normal School, Oshkosh, Wis., 1901-1907; Professor of Psychology and Education, University of South Dakota, 1907-1911; Associate Professor of Education and Supervisor of Student Teachers, University of Kansas, 1911-1914; Professor of Psychology, Drury College, 1914-1915; Lecturer in Education, summer sessions, University of Iowa, 1908; Kansas State Normal College, 1911, and University of Washington, 1913 and 1914; Professor of Psychology, Toledo University, 1915—

DAVID W. HENRY, A.B., A.M.

628 Norwood Ave.

Associate Professor of Education.

Massachusetts State Normal Diploma, 1909, State Normal School, Hyannis, Mass.; A.B., 1911, Collegiate Department, State Normal School, Emporia, Kans.; Graduate Student at Cornell University, 1912; A.M., 1915, Columbia University; Supervisor's Diploma, 1916, Teachers' College, Columbia University; Supervisor of School Gardens, Hyannis, Mass., 1908-1909; Principal of North Center School, Norwalk, Conn., 1909-1910;

Supervisor of Training School Gardens, Emporia, Kans., 1910-1912; Principal of Rowayton School, Norwalk, Conn., 1912-1913; Instructor in Open Air School, Ethical Culture School, New York City, N. Y., 1913-1914; Assistant Professor of Education, Toledo University, 1914-1915; Associate Professor of Education, Toledo University, 1915—

GLENN D. BRADLEY, A.M., Ph.D.

2111 Putnam St.

Associate Professor of History.

A.B., University of Michigan, 1907; A.M., University of Michigan, 1913; Ph.D., University of Michigan, 1915; Head, Department of History, Leavenworth, Kans., High School, 1909-1910; Principal, Newton, Kans., High School, 1910-1912; Instructor in English, University of Michigan, 1912-1914 and 1915-1916; Assistant in History, University of Michigan, 1914-1915; Assistant Professor of History and Acting Professor of English, Toledo University, 1916-1917; Associate Professor of History, Toledo University, 1917—; Director of University Extension, Toledo University, 1918—

*ROY J. COLBERT, A.B.

Instructor in Sociology and Biology.

HARRY SYLVESTER WILL, Ph.D.

3714 Hoiles Ave.

Acting Professor of Social Science.

B.A., 1910; A.M., 1916; Ph.D., 1918, Ohio State University. Acting Director of Social Work, Columbus, Ohio, 1911-1914; Acting Professor of Sociology, Ohio Wesleyan, Delaware, Ohio, 1918; Acting Professor of Social Science, Toledo University; 1919—

THE AIMS OF THE COLLEGE OF EDUCATION.

The College of Education was established by the Board of Directors of the University in 1916 as the Teachers College of Toledo University, the function of which should be

- (1) To assist the teachers of Toledo and vicinity to increase their efficiency as teachers and to broaden their horizon as citizens, and
- (2) To train teachers for secondary school positions.

THE DEGREE OF BACHELOR OF SCIENCE.

The University confers the degree of Bachelor of Science (in Elementary Education or in Secondary Education) upon regular students who have successfully completed the course of study required by the Teachers College for that degree either in the field of elementary education or in that of secondary education, provided they have given evidence of possessing those intellectual, physical, and personal traits, capacities, and abilities which in the judgment of the Faculty of the Teachers College make for success in teaching.

* On leave of absence, 1918-19.

THE DEGREE OF BACHELOR OF SCIENCE IN ELEMENTARY EDUCATION.

Matriculation Requirements for the Degree.

To be admitted as a regular student and candidate for the degree of Bachelor of Science in Elementary Education the student is required to furnish evidence either of having been graduated from a standard normal school or of having satisfactorily done work the equivalent of that required for graduation from such institutions.

Course Requirements for the Degree.

For the degree of Bachelor of Science (in Elementary Education) the student is required to complete 124 hours of work of a college grade. Of these 124 semester hours of collegiate work, 60 are for work required for admission in the Teachers' College. The other 64 shall include:

1. A major of 18 hours in the Department of Elementary Education which shall include Elementary Education 233-234, 249, and 259.
2. A minor of twelve hours in the Teachers' College courses in Education, Sociology, and Psychology.
3. A minor of twelve hours in the Social Sciences.
4. Free electives, 22 hours, in any of the Collegiate Departments of the University.

THE DEGREE OF BACHELOR OF SCIENCE IN SECONDARY EDUCATION.

Matriculation Requirements for the Degree.

To be admitted as a regular student and candidate for the degree of Bachelor of Science in Secondary Education the student is required to present evidence of having been graduated from the Junior Arts College or of having met the requirements for graduation of that college of Toledo University.

The Junior College work of students planning to enter the Teachers' College of Toledo University should be of such character as

1. To familiarize them with themselves and with the principles which applied make for increased student efficiency;
2. To acquaint them with the fundamental laws of mental activity; and
3. To awaken in them an intelligent interest in modern urban social, economic, and political problems and their evolution, in order that the students may appreciate the social significance of the work of our high schools and of our secondary school teachers.

The College recommends that students planning to become candidates for the degree of Bachelor of Science in Secondary

Education include in their Junior College studies the following courses or their equivalents:

Education 111	Principles of Human Behavior	3 hrs.
Education 112	College and University Education	1 or 2 hrs.
Education 114	Modern Educational Problems	2 hrs.
History 111	Modern European History	3 hrs.
Psychology 121	Elements of Psychology	3 hrs.
Sociology 113-114	Introduction to the Social Sciences	6 hrs.

Course Requirements for the Degree.

For the degree of Bachelor of Science in Secondary Education the student is required to complete 124 semester hours of collegiate work, which shall include 60 hours required for graduation from the Junior College and 64 hours of work satisfactorily completed under the supervision of the College of Education. The 124 semester hours of work shall include:

1. A major of fourteen hours in the Department of Secondary Education, which shall include Secondary Education 235, 236, 249, and 259.
2. Twenty hours in courses in the Departments of Education, Elementary Education, or Psychology, which shall include Education 233, 234, and 243-244.
3. A major of eighteen hours in any University Departments of Education.
4. A minor of twelve hours in any University Department outside of the Departments of Education and the Department in which the major work is being done.
5. A minor of twelve hours in the Social Sciences.

The courses leading to the degree of Bachelor of Science in Secondary Education have been approved by the State Department of Public Instruction of Ohio, so that students receiving this degree are eligible to receive the State provisional certificate to teach in high schools in the State. This certificate, under certain regulations of the State Department of Public Instruction, is convertible into a life certificate to teach in the State of Ohio.

RELATION OF THE TEACHERS' COLLEGE TO THE TEACHERS' TRAINING WORK OF THE STATE.

In the organization and work of its various college divisions the Teachers' College has aimed to fulfill the maximum requirements and suggestions of the State Department of Public Instruction and has been approved by that Department. Those who fulfill the requirements for the B. S. degree in Education are eligible as candidates, either for the high school provisional certificate or for the elementary provisional certificate.

The following regulations of the State Department of Public Instruction are of interest to students contemplating becoming candidates for either of the provisional certificates:

"Four-year State provisional certificates are granted by the Superintendent of Public Instruction. The provisional certificates are elementary, high school, or special.

"Only graduates of approved colleges or normal schools may be granted provisional certificates by the Superintendent of Public Instruction. A list of colleges and schools approved for preparation for the several certificates is made by the Superintendent of Public Instruction. An applicant for such a certificate must also be a graduate of a first grade high school or have the equivalent of that work.

"The fee for a State provisional certificate of any kind is one dollar. The fee will be returned if the applicant is rejected. Applications must be made on a form which is furnished by the Superintendent of Public Instruction. The application accompanied by the fee, and by a detailed transcript of credits from the college or normal school upon graduation from which the application is based, is to be filed with the Superintendent of Public Instruction, Columbus, Ohio.

"All State provisional certificates are valid for four years in any school district in the State. After twenty-four months of successful teaching on such certificate the holder may secure from the State Board of School Examiners by appearing before them at the time of the semi-annual meeting, and upon furnishing the evidence and paying the fee as stated above, a life certificate of like kind without examination.

DESCRIPTIVE CATALOG OF COURSES TO BE OFFERED IN THE TEACHERS' COLLEGE.

WHAT THE COURSE NUMBERS INDICATE.

The digit on the left indicates the college offering the course.

1. Indicates the College of Arts and Sciences, e. g. Bacteriology 132.
2. Indicates the Teachers' College, e. g. History 235.
3. Indicates the College of Commerce and Business, e. g., Commerce 321.

The next digit indicates the year for which the course is planned.

1. Designates courses planned for Freshmen.
2. Designates courses planned for Sophomores.
3. Designates courses planned for Juniors.
4. Designates courses planned for Seniors.

5. Designates courses planned for Graduate students.

EDUCATION.

Professor Stowe and Associate Professor Henry.

Education 231 Principles of Teaching 2 or 3 hrs.

Mr. Henry, First Semester, S., 8:20-10:00 A. M.

The course will be devoted to a study of the principles which underlie successful teaching and of the most effectual ways of incorporating these principles into practice. Methods of teaching will be approached from the point of view of the end to be attained, the method in each case being specialized instruments or means for the accomplishment of the aim.

Education 232 Teaching Pupils How to Study 2 hrs.

Mr. Henry, Second Semester, S., 8:10-10:00 A. M.

This course takes up the method by which efficient members of the social group solve their problems. The work that is being done in the average school is next considered with a view of bringing to consciousness the difficulties or problems that must be met. The several fundamental factors of logical study are discussed and an effort made to determine how teachers may direct pupils to do their school work in such a manner that they will be better able to solve their present and near future problems.

Education 233-234 History of Modern Education 4 hrs.

Mr. Henry, Both Semesters, S., 10:05-11:45 A. M.

Courses to be devoted to a study of the evolution of modern educational thought and practice in the field of secondary education from the early Christian times, in order to help teachers understand how things have happened to be as they are in the educational world today, as well as to solve more successfully the every-day problems of the high school classroom.

Education 235-236 Education Magazine Club 2 hrs.

Mr. Henry, Both Semesters, F., 4:05-5:00 P. M.

There are so many good educational magazines and so many excellent educational articles that it is impossible for us by ourselves to keep in touch with all of the best educational thought of the day as expressed in our popular and educational magazines. It is the purpose of the Educational Magazine Club to become a clearing house for the discussion of such thoughts. Each member of the Club will read an educational article or two each week and come prepared to give a brief report of the most important thoughts presented in the articles read.

Education 237 Increasing Teaching Efficiency 2 hrs.

Mr. Henry, First Semester, Th., 4:05-5:45 P. M.

This course will be devoted to the discussion of such problems as: What traits, capacities and abilities ought to be revealed in the work of teacher and pupils? Increasing teaching efficiency through vitalizing subject matter taught. Increasing effi-

ency through improving methods of making assignments, of questioning and of managing classes. Important types of lessons and critical points in the teaching of each type.
Not offered, 1919-20.

Education 238 Supervision of Class-room Instruction 2 hrs.

Mr. Henry, Second Semester, Th., 4:05-5:45 P. M.

Elementary Education 237 is a prerequisite to this course, which is devoted to a discussion of the best ways and means of helping teachers solve the problems discussed in Course 237.

Not offered, 1919-20.

Education 241 School Administration 2 hrs.

To be offered in 1919-20.

Among the problems which are considered in this course are: How the various units of educational administration have been developed and systematized. How the State controls and supports education. Methods of organizing efficient supervisory corps in State and City. How children in the schools are classified and their progress promoted through compulsory education, promotion, retardation, acceleration, elimination, special schools and classes, and school discipline. The function of school statistics, records and reports, and the most effective methods of keeping the same.

Education 242 Educational and Standard Tests 2 hrs.

Mr. Henry.

To be offered in 1919-20.

This course is concerned with the study of a score or more of the various tests that have been presented in recent years.

Education 243 Principles of Education 2 hrs.

Mr. Stowe, First Semester, Th., 4:05-5:45 P. M.

A study of the physiological, biological, psychological and sociological principles which are being incorporated into the best of modern educational thought and practice.

Not offered, 1919-20.

Education 244 Principles of Education 2 hrs.

Mr. Stowe, Second Semester, Th., 4:05-5:45 P. M.

A continuation of Course 243. In this course considerable attention will be paid to the study of the educational values of the various high school studies.

Not offered, 1919-20.

Education 247-248 Social Education 4 hrs.

To be offered in 1919-20.

This course is devoted to a study of the problem of how the school through its various activities can most effectively develop socially efficient citizens. The discussions of the class will be based to some extent upon Scott's "Social Education" and King's "Education for Social Efficiency."

Education 253 Philosophy of Education 2 hrs.

Mr. Henry, Second Semester, Wed., 4:05-5:45 P. M.
This course is planned for advanced students in education. The problems and questions relating to them are given to the students a week or so in advance of class meeting. The class work is mainly devoted to a discussion of the problems previously assigned. An extensive bibliography is given with each problem so assigned.

ELEMENTARY EDUCATION.**Associate Professor Henry.****Elementary Education 231-232 Child Study 4 hrs.**
To be offered in 1919-20.

This course deals primarily with the child in the elementary school. At first the emphasis is placed on physical growth and development. Later the emphasis is placed on the classification, development and significance of the various instincts. The instinctive tendencies are used as a basis for understanding the whole mental life, intellectual, emotional and volitional. Lectures, reports, discussions, text-book and outside readings.

Elementary Education 223-224 4 hrs.**History of Modern Elementary Education**

In 1918-19 and 1919-20 this course will be continued with Education 233-234 offered by Mr. Henry, both semesters, S, 10:05-11:45 A. M.

While some attention will be given to the important phases of the general history of education, the problems of the course will be such as are of vital interest and significance to elementary school teachers.

Elementary Education 249 a. and b. 4 hrs.**Practicum in the Principles of Teaching Elementary School Subjects.**

Mr. Henry, Both Semesters, M., 7:05-8:00 P. M.

Special individual conferences by appointment.

Intensive study of principles and problems involved in teaching elementary school arithmetic, English language and literature, history, geography, civics and hygiene. Each student selects two subjects for special study, including aims, types of lessons, and organization of units and curriculum. Lectures, discussion, special reports and thesis.

Education 259 a. and b. 4 hrs.**Seminar in the Teaching of Elementary School Subjects**

Mr. Henry, First Semester, M., 8:05-9:00 P. M.

Mr. Henry, Second Semester. Individual conferences and meetings of seminar to be arranged.

Open to candidates for the degree of Bachelor of Science in Elementary Education who are teachers in the service. Modern Educational problems are studied and the solution attempted

in the class room of the student. Intensive problems in the form of a survey to comprise the material for supervised teaching of elementary school arithmetic, English language and literature, history, geography, civics, or hygiene.

HISTORY.

Associate Professors Bradley and Henry.

History 233-234 General American History 4 hrs.

Mr. Bradley, Both Semesters, M., 4:10-6:00 P. M.

General American History for teachers. A course designed for teachers and others desiring a broad and reasonably thorough survey of American History 1760-1860.

The Revolution, its causes and results, formation of the constitution, growth of national spirit, rise of slave and plantation system, growth of tariff question, territorial expansion, anti-slavery movement, slavery and secession, and general consideration of national problems.

To be offered in 1919-20.

History 235-236 Current Events Magazine Club 2 hrs.

Mr. Henry, Both Semesters, F., 5:05-6:00 P. M.

A study of current events as recorded by leading periodicals. Each member of the club is supposed to subscribe for one of the standard weeklies and to be responsible for reports on events of importance recorded in his magazine.

PSYCHOLOGY.

Professor Trettien and Associate Professor Henry.

Psychology 231-232 Principles of Psychology 4 hrs.

Mr. Trettien, Both Semesters, Tu., 4:05-5:45 P. M.

The facts and principles of consciousness will be studied in a systematic way. Special topics will be investigated in order to determine psychological theories and technique.

Not offered in 1919-20.

Psychology 233 Educational Psychology 2 hrs.

Mr. Trettien, First Semester, Th., 4:00-6:00 P. M.

To be offered in 1919-20.

The psychological basis of education will be presented. Prerequisite, General Psychology. This course will be followed by either Psychology 142 or 146.

Psychology 235-236 Adolescence 4 hrs.

Mr. Trettien, Both Semesters, Th., 4:00-6:00 P. M.

A study of upper elementary and high school students for the purpose of becoming better acquainted with their mental, moral and physical capacities, traits, and abilities. The course is planned to be of practical value to upper elementary and high school teachers.

Not offered, 1919-20.

Courses Offered in Other Colleges.

Psychology 131-132	Mental Tests and Measurements	4 hrs.
Psychology 142	Genetic Psychology	2 hrs.
Psychology 143-144	Clinical Psychology	4 hrs.
Psychology 146	Psychology of the Emotions	2 hrs.
Psychology 147-148	Psychology of Character Analysis	4 hrs.
Psychology 159	Seminar	2 or 4 hrs.
Psychology 321-322	Psychology of Efficiency and Control	4 hrs.

SECONDARY EDUCATION.**Professor Stowe.****Secondary Education 235-236** 4 hrs.**High School Organization and Management.****To be offered in 1919-20.**

The principles of organization and administration of the high school in its relation to adolescent development, to the elementary schools and university and to the social and economic conditions of the community will be considered.

Secondary Education 249 a. and b. 6 hrs.**Practicum in the Principles and Observation of the Teaching of High School Subjects.**

Mr. Stowe, Director of Course, Both Semesters.
Time to be arranged.

Open to students who secure the approval of the Director of the course.

Each semester the student selects a subject for special study and is assigned to a successful high school instructor who serves as tutor or special advisor to the student. The latter makes a detailed study of the application of the principles of teaching to his subject. Research study of reports and discussions, and supervised observations, reports and discussions.

In enrolling, students will indicate on registration card subject in parenthesis after course number.. Subjects: Mathematics, Physics, Chemistry, Psychology, English, History, and Social Sciences.

Secondary Education 259 3 hrs.**Seminar in Teaching of High School Subjects**

Mr. Stowe, Director of Course, Second Semester.
Time to be arranged.

Open to students who have successfully completed Secondary Education 249a, and who secure the permission of the Director to register.

Each student is assigned to teach a class in secondary school work for the semester under the supervision of the Director of the course and the regular teacher in charge of the secondary school work.

Conferences with Director and Supervisor.

In enrolling, students will indicate in parenthesis after course number on registration card subjects which they desire to teach.

Subjects: Same as in Secondary Education 249.

SOCIOLOGY.**Acting Professor Will.****Sociology 231-232 Sociology and Modern Social Problems 4 hrs.**

May be offered 1919-20.

Sociology 237 Immigration and Americanization 2 hrs.

Mr. Will, First Semester, M., 4:00-5:00 P. M.

The problems of this course are treated from a four-fold point of view: (1) the life of the immigrant in his native land; (2) causes and conditions of migration; (3) effects of his presence on American institutions; (4) his assimilation to American civilization.

Sociology 238 The Negro, the Indian, and the Oriental 2 hrs.

Mr. Will, Second Semester.

The distinctive aspects of race conflict will be reviewed in this course with special reference to the development of a theory of backward peoples. Particular phases of the general problems discussed are: race psychology, caste, lynch law, economic and institutional adaptation, culture, transposition, and international implications.

Sociology 247-248 Educational Sociology 4 hrs.

Mr. Quillin, Both Semesters, Tu., 4:05-5:45 P. M.

The aim of this course is to present some applied sociology in school administration, discipline, classroom methods, student activities, etc. It is especially designed for high school and grade teachers and taught from the point of view of one who had many years of experience in secondary school teaching and six years' experience as a high school principal. The general principles of sociology are made to connect vitally and tangibly with the average teacher's most critical problems, with the two-fold result of making the teacher more acquainted with the relationship of himself as an individual to the social groups of the school and the community, and also the relationship of the individual pupil to his social groups. In brief, the course will show the social factors in the development of the individual.

To be offered in 1919-20.

REGISTER OF COLLEGE OF EDUCATION STUDENTS.

1918-1919.

FIRST SEMESTER.

List of Regular Students.*

Name	Hrs.†	Name	Hrs.†
Abbey, Adelene J.....	3	Kestel, Marion	5
Baer, Schanette	1	Kier, Christine	4
Bartley, Hazel E.....	10	Kinker, Minnie L.....	8
Bihn, Anna	10	Marriott, M. E.	2
Bihn, Louise E.....	18	May, Isabelle DeM.	4
Brown, G. Maude.....	3	McGuinness, Margaret	2
Brown, Maude B.....	5	Miller, Lucy I.....	4
Carter, B. L.....	10	Nauts, Alice C.....	7
Corlett, Louise	3	O'Connor, Helen G.	3
Craig, Adelaide (Mrs.).....	2		
Cronk, Grace	3	Riely, Edith	3
DeLisle, Grace	2	Riely, Genevieve	3
Emerson, E. Eva.....	3	Riely, Stella	3
Feller, Ella	3		
Goorley, Christina	5	Schultz, Henrietta	4
Grigsby, Allan D.....	5	Schwartzler, Anna W.....	3
		Smith, Sarah V.....	3
Hansen, Irene L.....	2	Spilker, Clara B.....	18
Hoff, Lida L.	2	Stowe, Marjorie H.....	5
Howard, Lulu F.....	4		
Hoyt, Marian D.....	3	Tracy, Otto P.....	4
Hughes, Nellie A.....	5	Turner, Edna G.....	4
		VanNoorden, Anna	3
Jacobs, Floy E.....	5		
Jacobs, Retta E.....	3	Waite, Margaret	7

*Regular students are students who have been graduated from first grade four-year high schools, or from secondary schools with equally high standards.

†Semester hours enrolled.

Special Students.*

Name	Hrs.	Name	Hrs.
Salter, Frances H.....	2	VanNoorden, Daisy	2
Shiple, Sadie C.....	5		

SECOND SEMESTER.

List of Regular and Special Students.

Ayers, Ella M.	Limpert, Lillian
Barnes, George W.	Madson, Sylvia M.
Bihn, Anna	May, Isabelle D.
Bihn, Louise E.	McGuinness, Margaret
Brown, G. Maude	Miller, Lucy Irene
Buell, Irene	Moughler, Mrs. Maud
Burwick, Charlotte	O'Brien, Irene
	O'Connor, Helen G.
Carter, Raymond L.	Pennell, Eleanor E.
Craig, Mrs. Adelaide	Phillips, Grace R.
Cronk, Grace B.	
DeLisle, Grace M.	Ramseyer, Rose C.
DeVore, Eva E.	Riely, Edith
	Riely, Genevieve
Eckenrode, M. Catherine	Riely, Stella
Elliott, Robert H.	Schultz, Henrietta
Feller, Ella	Schwartzler, Anna W.
	Smith, Sara V.
Goulet, Alma E.	Spencer, Gertrude B.
Grigsby, Allan D.	Stowe, Marjorie H.
	Swentzell, Nellie S.
Hansen, Irene	Thompson, Jean
Hoyt, Marian D.	Tracy, Otto P.
Hughes, Nellie A.	
Jacobs, Floy E.	Van Aarle, Margaret
Jacobs, Retta E.	Van Noorden, Anna
	Van Noorden, Daisy
Kruger, Walter E.	Waite, Margaret A.

*Special students are students who are not graduates of standard four-year high schools or who have not indicated the fact that they are graduates of such institutions.

THE COLLEGE
OF
COMMERCE & BUSINESS



Announcements

1919 - 1920

CATALOG

1918 - 1919

THE FACULTY.

1918-1919.

A. MONROE STOWE, A.M., Ph.D. 908 Prospect Ave.
President of the University and Professor of Education.

*THOMAS L. KIBLER, Ph.D.
Dean and Professor of Transportation.

FRANK U. QUILLIN, A.B., A.M., Ph.D. 1460 W. Delaware Ave.
Acting Dean and Professor of Business Administration.

A.B., 1903, Ohio Wesleyan University; A.M., 1905, Harvard University; Ph.D., 1910, University of Michigan; Professor and Head of Department of Economics, Knox College, Galesburg, Ill., 1912-17; Associate Professor of Business Administration, Toledo University, 1917-18; Director of Summer Session, 1918; Acting Dean and Professor of Business Administration, 1918—

FREDERICK JUCHHOFF, LL.M., Ph.D. 208 Nineteenth St.
Associate Professor of Accountancy.

Ph.B., 1906, Ph.D., 1912, Kansas City University; LL.B., 1908, Ohio Northern University; Graduate Student University of Chicago, 1909-14; LL.M., 1913, University of Maine; Graduate, School of Commerce, 1916, Northwestern University; Instructor in Commerce and Finance, 1906-8, Berea College; Instructor, Chicago High School, 1910-12 and 1914-17; Associate Professor of Commerce and Finance, James Millikin University, 1913-14; Professor of Law, Finance and Accountancy, Chicago College of Law, 1914-17; Lecturer, Finance and Accountancy, University of Virginia, Summer Sessions, 1915-18; Associate Professor of Accountancy, Toledo University, 1917—

LORAIN FORTNEY, Ph.D., LL.B. 344 Irving St.
Professor of Commerce.

A.B. and LL.B., West Virginia University, 1900; Ph.D., University of Pittsburgh, 1903; Graduate student, University of Chicago, seven quarters, 1910 to 1916; Principal of West Liberty State Normal School, W. Va., 1903-09; Professor of Economics and Finance, Marquette University, 1911-1918; Professor of Commerce, Toledo University, 1918—

*WILLIAM M. LEISERSON, A.B., Ph.D. 624 Acklin Ave.
Professor of Political Science.

AUGUSTUS W. TRETTIEN, A.B., Ph.D. 2208 Rosewood Ave.
Professor of Psychology.

State Normal School Diploma, 1894, Oshkosh, Wis.; B.L., 1899, University of Wisconsin; Ph.D., 1904, Clark University. Supervising Principal of Schools, Appleton, Wis., 1894-1897; Professor of Psychology and Education, State Normal School, Oshkosh, Wis., 1901-7; Professor of Psychology and Education, University of South Dakota, 1907-11; Associate Professor of

*Leave of absence, 1918-19,

Education and Supervisor of Student Teachers, University of Kansas, 1911-14; Professor of Psychology, Drury College, 1914-15; Lecturer in Education, Summer Sessions, University of Iowa, 1908; University of Missouri, 1910 and 1915, Kansas State Normal College, 1911, and University of Washington, 1913 and 1914; Professor of Psychology, Toledo University, 1915—

FRANK J. PAVLICEK, Ph.B.

302 Columbia St.

Associate Professor of English.

Ph.B., Ohio State University, 1901; Graduate Student, six quarters, 1905-1911, University of Chicago; Graduate Student, Summer Session, University of Michigan, 1913; Instructor, English and Public Speaking, Central High School, Toledo, 1902-1915; Waite High School, Toledo, 1915-1918; Associate Professor of English, Toledo University, 1918—

MAURICE ELGUTTER

Spitzer Bldg.

Part Time Instructor in Advertising.

A. J. LYNN, A.B.

Part Time Instructor in Accounting.

L. A. MILLER

Office Manager, Willys-Overland Co.

Part Time Instructor in Office Management.

D. J. SAPOSS, A.B.

Lecturer.

FOREWORD.

ESTABLISHMENT OF THE COLLEGE.

The College of Commerce and Business was established by the Board of Directors of the University in order to offer opportunities for professional business training to business men and women and to those contemplating a business career.

EDUCATION FOR THE PROFESSION OF BUSINESS.

This is a business age. The complexities of modern industry demand men keenly alert to business opportunities and methods, with minds trained to intelligent consideration and decision. The business world cannot afford to wait for the hard school of experience to train men for efficient service. The interests affected are too great; such a process too costly. Nor can the individual, ambitious for success in the business world, afford to wait for experience alone when it is possible for him to glean the result of the accumulated knowledge and experience of business men from research and study and discussion.

It is now clearly recognized that business laws and methods are as complex and intricate as are those in any other profession. The public and the courts now actually hold the business man liable for a reasonable degree of knowledge and skill

in his relations to his constituents. This is not different from the code of ethics and laws to which men of the older professions are subject.

A business education gives a clearer perspective of the factors that have to do with the productive process—the human factor, the natural resources, the mechanical factor, and the governmental. It makes a man a more intelligent and broader minded student of the conflict of interests among the productive factors—and this is an advance step in the solution of such problems; it gives a method of approach, a power to investigate, to mass evidence, to analyze and to conclude—all with scientific accuracy and precision.

BUSINESS EXPERIENCE.

It is not proposed to substitute business education for business experience. The former, however, should logically precede; or if this be impracticable, the two should proceed hand in hand. Experience is absolutely essential to the successful application of business principles. It welds knowledge and method into more readily applicable form. It steadies the mind and the nerve of the business man as it does of the surgeon and the lawyer.

THE COLLEGE OF COMMERCE AND BUSINESS.

The College of Commerce and Business offers opportunity for a modern business education. The work is available for those who are employed during the day. The schedule enables the student to attend two classes in one evening, the first period extending from 7-8:45 P. M., and the second from 8:50-9:45 P. M. This plan has been introduced because it permits the student to economize his evenings for class work and home study to the best advantage. It is possible, therefore, for a student entering without condition to complete all the work for the Diploma in Business Administration in three years by attending classes from two to three evenings each week during the scholastic year.

REQUIREMENTS FOR ADMISSION.

A student may be enrolled for any day or evening courses by presenting to the Dean satisfactory evidence that he is able to profit by the instruction given. If such student, however, desires credit toward a diploma or degree, he must present certification of graduation from an accredited high school, or its equivalent. A student complying with such requirements is designated, "Regular." All others are classified, "Special."

DIPLOMAS, DEGREES AND CERTIFICATES.*

DIPLOMAS.

Students, having satisfied the entrance requirements, will be awarded a Diploma in Business Administration upon the following conditions:

- (1) The satisfactory completion of sixty semester hours in accordance with the schedule of courses prescribed for the Department in which the student is specializing;
- (2) Regular attendance and satisfactory work in the seminar on Business Problems to be conducted during the third year's work.

DEGREES.

Students having completed a two years' college course, such as is offered in the Junior Arts College of Toledo University or other institutions of acceptable rank, may secure the degree of Bachelor of Science in Business Administration upon the following conditions:

- (1) The completion of a minimum of sixty semester hours, the subjects chosen being approved by the committee on diplomas and degrees;
- (2) Successful business or professional experience for at least one year in a position of responsibility;
- (3) The presentation of an acceptable thesis representing careful research into some practical business problem.

CERTIFICATES.

Students who cannot comply with the technical entrance requirements but who have been admitted as special students by virtue of their maturity and experience will be awarded a certificate in Business Administration upon completing the course prescribed above for Diploma students.

*The requirements outlined below apply to students registering for the first time in September, 1918, or to those registered prior to this time who have not completed the prescribed course on or before September, 1921.

DIPLOMA COURSES.*

BUSINESS ADMINISTRATION.

First Year.

First Semester.

Accounting 331
Economics 311
Business Administration 331
English 312

Second Semester.

Accounting 332
Economics 312
English 312

Second Year.

First Semester.

Banking 321
Business Law 311
Marketing 323
Psychology 311

Second Semester.

Banking 322
Business Law 312
Marketing 326
Psychology 312

Third Year.

First Semester.

Banking 331
Business Administration 341
Business Law 321
Sociology 315

Second Semester.

Banking 332
Business Law 322
Business Administration 342
Economics 331
Marketing 344

ACCOUNTING.

First Year.

Identical with course in business Administration.

Second Year.

First Semester.

Accounting 333, Advanced Accounting
Business Law 311, Survey
Banking 321, Money and Currency
Business Administration 341, Corporation Finance

Second Semester.

Accounting 334, Advanced Accounting
Business Law 312, Survey
Banking 322, Banking Practice
Business Administration 342, Corporation Finance

* Courses recommended to students majoring either in Business Administration or in Accounting. For titles and descriptions of courses see Descriptive Catalog of Courses on following pages.

Third Year.**First Semester.**

Accounting 343, Auditing
 Accounting 341, Factory Cost
 Accounting
 Business Law 331
 Business Administration, Sem-
 inar in Business

Second Semester.

Accounting 342, Public Service
 Corporation Accounting
 Business Law 332
 Business Administration, Sem-
 inar in Business

DESCRIPTIVE CATALOG OF COURSES OFFERED IN THE COLLEGE OF COMMERCE.

ACCOUNTING.

Associate Professor Juchhoff and Mr. Lynn.

Accounting Laboratory**3 hrs.**

Mr. Juchhoff and Mr. Lynn, Both Semesters.

A number of laboratory periods, at hours to be arranged, will be offered each week. Students enrolled in the various accountancy courses are expected to devote a certain amount of time to practical accounting and the solution of accounting problems under the direct supervision of the instructor.

To be offered in 1919-20.

Accounting 315**Elementary Accounting****1½ or 2 hrs.**

Mr. Lynn, Second Semester.

This course covers a period of one semester and is designed for those who do not have a working knowledge of bookkeeping, obtained either in a high school or through actual experience. The student will make an intensive study of the principles of double entry bookkeeping, from an accounting standpoint, together with the application of these principles to actual practice.

To be offered, 1919-20.

Accounting 331**General Accounting****1½ or 2 hrs.**

Mr. Juchhoff, Both Semesters.

A course in general accounting, open to those who have completed course 315 or its equivalent. Among the topics considered during this semester will be: single entry, its application and special problems; the more common original and subsidiary records; controlling accounts; partnership organization and adjustments; realization and liquidation statements; deficiency accounts; statement of affairs; averaging accounts; consignments.

To be offered, 1919-20.

Accounting 332**General Accounting****1½ or 2 hrs.****Mr. Juchhoff, Both Semesters.**

This course is a continuation of 311 and begins with the principles of corporation accounting. Other subjects considered will be: leaseholds; manufacturing accounts and statements; agencies and branches; patents; depreciation; deferred charges and credits; dividends; stock values; bonds; sinking and other funds; private ledger; stock and bonds sold at premium and discount; treasury stock; fire losses; defalcations; liquidating a corporation; mergers and holding companies.
To be offered, 1919-20.

Accounting 333**1½ or 2 hrs.****Advanced Accounting and Auditing****Mr. Juchhoff, First Semester.**

This, and the courses following, are designed primarily for those who desire to prepare for the practice of public accountancy and are open to those who have satisfactorily completed the work in General Accounting. The instruction will consist of lectures on accounting subjects which are exhaustively treated in their practical and theoretical aspects, with special emphasis upon auditing. Among the subjects treated will be advanced problems in corporation accounting, the nature of various kinds of assets and liabilities, the principles of depreciation, reserve accounts; special voucher systems; bonds and sinking funds; capital receipts and income, etc. The student will be required to devote considerable time to the solution of practical accounting problems taken from the C. P. A. examinations of Ohio and other states.
To be offered, 1919-20.

Accounting 334**1½ or 2 hrs.****Advanced Accounting and Auditing****Mr. Juchhoff, Second Semester.**

This is a continuation of course 321 and it is conducted in the same manner. Among the subjects considered will be mergers and consolidations, board of trade accounts; brokerage accounts; life and fire insurance; the accounts of executors and receivers; municipal and institutional accounting; public utilities; banks and trust companies; annuities, etc. The solution of the more difficult C. P. A. and other problems will be continued.
To be offered, 1919-20.

Accounting 341**Factory Cost Accounting****1½ or 2 hrs.****Mr. Juchhoff, Both Semesters.**

This course is planned to meet the needs of persons now engaged in factory accounting as well as persons who have completed the general and advanced courses. Consideration is given to the principles and methods of factory accounting, including the various methods of cost finding, assembling of data collected, the proper distribution of indirect costs, etc. The student will work out the transactions covering a month's operation of a manufacturing industry and is expected to devise special systems to fit given data.
To be offered, 1919-20.

Accounting 342 1½ or 2 hrs.
Public Service Corporation Accounting

Mr. Juchhoff, Second Semester.

The accounting methods and systems prescribed by the Interstate Commerce Commission and the various state commissions for telephone, street railway, electric light and power, gas, and other public utilities are covered. Constant comparison will be made with industrial practice as to terminology, plant costs, real and tangible values, discounts and premiums on securities, depreciation, classification of maintenance and betterment expenditures, etc.

To be offered, 1919-20.

Accounting 343 1½ or 2 hrs.
Auditing and Accounting Problems
 Mr. Juchhoff, Second Semester.

A one semester course devoted to the discussion and solution of 80 graded problems taken from recent state examinations. The class will read and discuss one or two text books on auditing and the new revenue laws will be analyzed.

To be offered, 1919-20.

ADVERTISING.
 (See Marketing.)

BANKING.

Professor Fortney.

Banking 321 1½ or 2 hrs.
Money and Credit
 Mr. Fortney.

A course in the principles of money and credit, including a study of the nature of money, coinage, kinds of money and monetary standards, elastic and inelastic currency, use and influence of credit, domestic and foreign exchange.

Banking 322 1½ or 2 hrs.
Banking Practice
 Mr. Fortney, First Semester, Tu., P. M.

A detailed study of the organization, functions, management, accounts, and operations of banks.
 To be offered, 1919-20.

Banking 331 1½ or 2 hrs.
Principles of Banking
 Mr. Fortney, Second Semester, Tu., 8:30 P. M.

The organization and operation of banking systems. The course includes a review of the banking history of the United States and a study of the banking functions and operations of the Federal Reserve banks, national banks, and the various state banks of the United States.

Banking 332 1½ or 2 hrs.
Investments
 Second Semester, — P. M.

Nature, method and laws of investment; forms of investment; investment institutions; fluctuation of investment values; stock markets; relation of speculation to investment; real estate values and investments.

To be offered, 1919-20.

BUSINESS ADMINISTRATION.**Professor Quillin.**

The chief aim of the Department of Business Administration is to acquaint the student with the general principles of handling men, systems, material, and finances, with a view to the increase of net profit.

Business Administration 331**1½ or 2 hrs.****Business Organization****Mr. Quillin, First Semester, Th., 7 P. M.**

A study of types of business organization, principles of location, and the internal management of a large business. Some of the topics studied are the functions and methods of the various departments, as purchasing, production, cost accounting, selling, credit, and traffic; systems of managing and paying labor; and the manager's use of statistical information. The student is led to recognize principles by his study of actual cases in commerce and industry.

To be offered, 1919-20.

Business Administration 341-342**3 or 4 hrs.****Corporation Finance****Mr. Quillin, Both Semesters, Tu., 7 P. M.**

Corporations are studied from the point of view of their financial organization and management. General features of the course are the nature and characteristics of corporations; their formation and promotion; kinds of securities; management of sinking funds, refunding operations, and profits; reorganizations; and federal and state control. Corporate reports are analyzed, and the individual's study of leading corporations is required.

To be offered, 1919-20.

BUSINESS LAW.**Professor Fortney.****Business Law 311-312 Survey of Business Law****2 or 4 hrs.****Mr. Fortney, First or Both Semesters, Wed., P. M.**

A brief survey of the principles of Business Law.

Business Law 321 Contracts and Agency**Mr. Fortney, First Semester, Wed., P. M.**

The formation, interpretation, operation, and discharge of contracts. Nature of the agency relation; mutual rights and duties of the principal and agent; rights and obligations of third persons; termination of agency.

Business Law 322 Sales, Mortgages, and Leases**Mr. Fortney, First Semester, Wed., P. M.**

Formation of the contract of sale; transfer of title; rights and obligations; remedies; mortgages of real and personal property; leases of real and personal property.

Business Law 331**Negotiable Instruments, Guarantyship and Suretyship****Mr. Fortney, First Semester.**

Formation of the negotiable contract; negotiations; rights and liabilities; discharge of negotiable contracts; bills of exchange; promissory notes; checks. A brief study of guarantyship and suretyship relations.

To be offered, 1919-20.

Business Law 332 Partnerships and Corporations**Mr. Fortney, Second Semester.**

Formation of partnership; rights and obligation of partners; partnerships under special statutes; termination of partnerships. Formation and powers of corporations; rights of stockholders to dividends and control; liabilities of stockholders; public regulation; termination of corporations.

To be offered, 1919-20.

Certain courses given in the College of Law may, with permission of the Dean, be credited as Business Law.

ECONOMICS.**Professor Fortney.**

The aim of the Department of Economics is to survey the broad fundamental principles underlying the world's industrial system and to show the student his connection therewith. A liberal scientific viewpoint in the discussion of the vital economic questions of the day is maintained at all times. Never in the history of the world has the truth been so vividly brought to mind that a nation's welfare is dependent to a large extent upon the general diffusion of sound economic thinking among the mass of its people. In war times and in peace times the fundamental principles governing the complex relations so necessary to the securing of the necessities and the comforts of life are the same. Likewise it is found that the principles affecting a nation's wealth are the same as are applicable in the case of the individual citizen.

While the study of Economics is regarded by some as especially important to those contemplating a business career or the study of law, the truth is gradually getting acceptance that no man or woman can be regarded as educated or properly fitted for the responsible duties of citizenship who has neglected this most important field of knowledge.

Economics 311**Business Economics****1½ or 2 hrs.****Mr. Fortney, First Semester, Monday, 7 P. M.****Second Semester, Tuesday, 7 P. M.**

This course is the first half of a year's work in the principles of Economics and is designed to give the student an acquaintance with the working principles of Economics. The topics cov-

ered during the semester include the evolution of economic society, production, large-scale production, value and price, monopolies, and trusts and business organization and administration. Practical subjects are introduced in order to supply material to illustrate the principles discussed.

Economics 312 Business Economics 1½ or 2 hrs.

Mr. Fortney, Second Semester, Monday, 7 P. M.

This course, following Economics 311, completes the study of principles of Economics. The work includes a study of money, credit, banking, domestic and foreign trade, transportation, labor problems, wages, interest, rent, profits, governmental control of industries and public revenues and expenditures.

Economics 331 Statistical Theory and Method

Mr. Fortney, Second Semester, Monday, 8:30 P. M.

Principles of statistics, involving their application to economic and other subjects. The course is designed to aid students in investigation and in the presentation of material thus obtained. A moderate knowledge of mathematics is desirable.

To be offered in 1919-20.

Economics 333 Labor Problems 1½ or 2 hrs.

Mr. Leiserson and Mr. Saposs, First Semester, W., 7 P. M.

Unemployment, trade unions and employers' associations, profit sharing, welfare work, and labor legislation, methods of hiring and firing employees, time and piece wages, premium and bonus systems, factory benefit system, old age pensions, safety and sanitation, shop lighting and ventilation, health and hospital work, home visiting, recreation for employees, and other activities usually grouped under the term "Welfare Work."

**Related Courses in the College of Arts that May Be Credited by
the College of Commerce:**

Economics 134 Immigration and Americanization.

Economics 143 Industrial Combinations.

Economics 144 History of Economic Thought.

Political Science 141 Relation of Government to Business.

Political Science 149 Public Service Practice.

ENGLISH.

Associate Professor Pavlicek.

The purpose of the courses in English and Public Speaking in the College of Commerce, is to create an interest and skill in the kind of written and spoken English which gets results in business. Commanding the attention and respect of others through good speech plays an important part in the success of a business man. Recently considerable attention has been given to the new kind of correspondence, the purpose of which is to get new business as well as to keep the old,—the kinds of letters that are designed to do the work of a living salesman. A study

of effective correspondence will be made in connection with all the practical English courses.

English 111c **Practical English** **1½ or 2 hrs.**

Mr. Pavlicek, Both Semesters, Th., 7 P. M.

The study of words, the construction of sentences, the writing of paragraphs, the organization of longer compositions—all are a part of the work of this course. Some time is given to grammar and elementary principles of Rhetoric.

To be offered 1919-20.

English 312 **Business English** **1½ or 2 hrs.**

Mr. Pavlicek, Both Semesters, Mon., 7 P. M.

The course offers training in the kind of English that gets results in business. The elements of good English are studied as preliminary to the writing of effective letters and other business forms.

To be offered 1919-20.

English 315 **Public Speaking** **1½ or 2 hrs.**

Mr. Pavlicek, First Semester, Tu., 7 P. M.

A practical course for business people and others in effective speaking. The purpose of the course is to develop confidence in one's self, and to eliminate self-consciousness and stage fright. Assistance is given in the organization and presentation of material.

To be offered 1919-20.

English 316 **Public Speaking** **1½ of 2 hrs.**

Mr. Pavlicek, Second Semester, Th., 8:30 P. M.

A continuation of course 315. Attention is given to the occasional speech of presentation, acceptance, eulogy, etc. The work is more technical than in 315 and leads to more finished work than the first semester.

MARKETING.

Professor Fortney and Mr. Elgutter.

The chief aims of the Department of Marketing are two: (1) To discuss the fundamental principles governing the distribution and the exchange of commodities; and (2) To show the possibilities in the development of foreign trade relations both for the nation and for the individual, most emphasis being laid upon the latter.

Marketing 323 **Advertising** **1½ or 2 hrs.**

Mr. Elgutter, Both Semesters, Mon., 7 P. M.

The fundamental principles of advertising and advertising technique. The following subjects are treated: Copy—its nature, purpose and mechanics; display; organization of agencies and their relation to publishers; rates, circulation; direct advertising; and advertising campaigns.

To be offered 1919-20.

Marketing 326 Direct-by-Mail Advertising 1½ or 2 hrs.**Mr. Elgutter, Second Semester, Fri., 7 P. M.**

A course designed to acquaint students with the special field of advertising known as direct or direct-by-mail, the form of advertising that is being utilized more and more by industrial and mercantile concerns. The proper kind of letter writing, how to follow up inquiries, how to compile lists of prospects, are among the topics studied.

To be offered 1919-20.

Marketing 344 Foreign Trade 1½ or 2 hrs.**Mr. Fortney, Second Semester, Th., 8:30 P. M.**

A course in commercial organization in foreign trade, including a survey of the foreign trade of the United States, a study of the opportunities for foreign trade in the various countries, a detailed examination of the facilities employed and the methods used in foreign trade and an inquiry into the activity of the United States government in promoting foreign trade. Lectures and assigned readings. Frequent use of government documents.

Marketing 346 South American Markets 1½ or 2 hrs.**Mr. Fortney, Second Semester, Th., 7 P. M.**

This course will include a study of the physical and social conditions that determine the commercial importance of South America; the present importance of South American commerce with the United States and other countries; opportunities of the United States in South America; banking and transportation facilities; and the methods best adapted to develop trade with South America. Lectures and assigned readings. Government documents are drawn on for much of the material of the course.

PSYCHOLOGY.**Professor Trettien.****Psychology 311-312 Psychology of Efficiency and Control 4 hrs****Mr. Trettien, Both Semesters, Mon., 7-9 P. M.**

The course is designed to give an analysis of the psychological factors and problems that occur in everyday life. Types of mental attitudes, methods of control and standards of personal efficiency will be emphasized.

SOCIOLOGY.**Professor Quillin.****Sociology 315 The Individual and Society 1½ or 2 hrs.****Mr. Quillin, Second Semester, Th., 7 P. M.**

An introductory course in the study of the principles controlling the organization of society, showing especially how the individual is influenced by the social forces about him. A study of human nature, of the democratic principle, of the "mob mind," of social classes, of human institutions and their effect upon personality, public opinion and public will. A fundamental course for all people who wish to know themselves more fully in their relations with their fellow men.

To be offered 1919-20.

TRANSPORTATION.**Professor Fortney.****Transportation 331****1½ or 2 hrs.****The American Transportation System.****Mr. Fortney, Second Semester.**

This course will include a brief summary of the development of transportation facilities in the United States, including technical improvements, public aid to railroads, competition, rate wars, pools, traffic associations, and consolidations. It will include also a description of present railroad systems, the organization of freight, passenger, express and mail services, the Great Lakes service and traffic and the relation of water and rail carriers.

**REGISTER OF COLLEGE OF COMMERCE AND
BUSINESS STUDENTS.****1918-1919.****FIRST SEMESTER.****List of Regular Students.***

Name	Hrs.		Hrs.
Ambacher, Choice	2	Neuber, Paul	4
Black, Wayne S.....	2	O'Brien, Mary H.....	4
Bowers, Henry T.....	6	O'Connor, Thos. J.....	4
Brennan, Kathleen E.....	5		
Currier, Mabel W.....	4	Peiter, H. A.	4
Gerber, Henry C.	2	Silvester, Herbert	6
Gregg, W. B.	2	Stillier, Marie	4
Hadden, Clarence B.....	8	Surfus, Carson M.	5
Hartwell, Hazel M.....	9		
Landis, Lorin R.....	6	Tracy, James F.....	8
Lynn, Aud. J.	10		
Miller, Stanley E.....	6	Way, Ralph B.....	4
Murbach, Florence	2	Weeman, Adelaide	4
		Whitaker, C. D.	2

*Regular students are students who have indicated the fact that they have been graduated from a four-year high school, or who have presented evidence of having completed an equivalent course of study.

Special Students.*

	Hrs.	Hrs.
Allemeier, Albert W.	Lawicki, Albert M.	
Allemeier, Rose	Lemke, Edward C.	
Aschbacher, Karl	Lubel, Abe	
Bell, Anna Marie	McGinnis, David W.	
Bergman, Vincent H.	McKenzie, E. C.	
Billstein, A. H.	Manthey, Carrie	
Bryan, Ray C.	Maxon, Frank E.	
Coehrs, W. A.	Melcher, W. E.	
Connolly, Clifford J.	Mensing, John B.	
Crossley, L. N.	Moughler, William F.	
Crossley, Wm. O.	Munn, John O.	
Daly, Ethel	Nagel, Herman, Jr.	
David, Rose	Neidlinger, Anna	
Faler, Elma	Neuber, Willy	
Fennell, James E.	Newcomb, Frank W.	
Fogg, Alton T.	Ott, Fred W.	
French, H. A.	Peterson, Amanda	
Gilmartin, Gertrude	Peckinbaugh, C. W.	
Herman, Ralph	Ray, Mrs. Bernice	
Hodson, Thos. R.	Ryszkowski, F. J.	
Horan, James D.	Schei, Henry G.	
Jay, James A.	Schlachter, John M.	
Jenssen, Rae M.	Schneider, Sam G.	
Johnson, Fred T.	Seeman, Martha A.	
Jones, Oliver	Shafer, C. J.	
Kaley, Nellie L.	Sharp, Jennie	
Kappus, Agatha K.	Sharpe, Estella M.	
Kern, Evelyn B.	Sherwood, J. R.	
Kitchen, Elva L.	Shirkey, Carl	
Kitchen, Wm. H.	Shull, Ollie	
Keller, Arthur C.	Simonds, Florence	
Kuntz, Hugo H.	Slayton, Harry W.	
LaCroix, May B.	Snell, Rosa M.	
Land, E. E.	Sponseller, L. H.	
	Sprengel, Wm. H.	
	Sullivan, Clarence D.	

*Special students are students who have not indicated that they are graduates of a four-year high school.

Tabor, Frank
Trost, Carl P.
Trout, Louis G.

Wake, William J.
Warren, Earl W.
Wiess, Ernest
Werr, Julius W.

Wagner, G. F.
Wahmhoff, Georgiana

York, Herbert M.

SECOND SEMESTER.

List of Regular and Special Students.

Adler, Ruth A.
Affleck, John R.
Allemeier, Albert W.
Allemeier, Rose
Allyn, W. L.
Alor, Mary G.
Ambacher, Choice
Ames, Henry F.
Apple, George K.
Aschbacher, Karl P.
Aubry, Frank
Avery, A. E.

Bachellor, Raymond G.
Baney, Archie C.
Barber, William M.
Barnes, George G.
Barret, Elmer F.
Barrett, Don R.
Battis, Ruth E.
Battis, W. Carl
Brown, Cleo R.
Bruning, Henry, Jr.
Bryan, Ray C.
Burgie, Elfrieda D.
Burns, R. L.
Butler, Donald M.
Baxter, William K.
Baummith, Harold J.
Becker, Frank W.
Bell, Anna M.
Bell, Mrs. Wm. F.
Berman, Louis
Billig, Harold S.
Black, Wayne S.
Blair, George B.
Blank, Walter H.
Blessing, Wm. F.

Bodley, Thomas W.
Boese, A. W.
Boessel, Caesar A.
Boos, William E.
Brand, Wm. Harvey
Breede, L. W.
Bremforder, Herbert F.
Broad, John F.
Brock, Kenneth E.
Brown, Arthur R.

Caldwell, Ella
Caldwell, Frances M.
Campbell, H. C.
Carrigan, Eva J.
Carwolha, Julian
Chadwick, Frank
Chambers, Clare A.
Chambers, Ray L.
Chlopek, Betty
Choffat, Lenora M.
Cisler, Cornelia H.
Clay, Chester L.
Coehrs, William A.
Collins, C. C.
Collins, W. B.
Connolly, Clifford J.
Connolly, Helen I.
Conner, W. S.
Cozzins, Francis R.
Crossley, Lawrence N.
Crossley, William O.
Cullen, Edward D.
Currier, Mrs. Mabel W.

David, Rose
Davies, Daniel H.
Davis, Frances B.

Davis, John R.
Davis, Nora B.
DeLong, Oscar E.
Dennis, J. Holland
Detwiler, Genevieve B.
Dickson, Mabel M.
Dierks, Fred M.
Dirlam, Edna M.
Doerr, Clara L.
Dorsey, Chas. E.
Doud, Philip A.
Downs, Robert J.
Dripps, H. W.
Egger, Albert H.
Ehlert, Hattie

Faber, Elma
Fennell, James E.
Fink, Harry F.
Floering, A. L.
Francis, C. H.
French, H. A.
Frent, Pearle E.
Fuhrer, Carl J.
Fuhrer, Martin E.
Gardner, Earl J.
Gerber, Henry C.
Gerchow, Roland C.
Giesel, Karl M.
Gillis, Margaret M.
Gilmartin, Gertrude
Glowacki, Chester J.
Gorman, Thos. E.
Gorsuch, Lucille M.
Gregg, W. B.
Gruendyke, Arthur M.
Gwinner, Elmer
Hadden, Aldaus B.
Hadden, Clarence B.
Hall, Landon E.
Hamann, Roy C.
Hanson, Hanna
Harris, L. Amelia
Hartman, George W.
Hawley, Crosby N.
Heimrich, John I.
Herman, Ralph
Hildebrand, Elmer S.

Hill, Merrick M.
Hill, Simon C.
Hirssig, Edward L., Jr.
Hisey, Floy G.
Hodson, Thomas R.
Holmes, Merrell E.
Hoover, Charles D.
Hoover, Edith
Howald, George E.
Horan, James D.
Howell, Gay
Huffman, W. J.
Hyatt, Ned A.

Irwin, Harry T.

Jacobson, Marc
Jamison, Ralph C.
Jay, James A.
Johnson, Mrs. Ella E.
Johnson, Fred T.
Jones, Oliver
Joyent, Mary M.
June, Mrs. Virginia

Kappus, Agatha K.
Kappus, Irene
Karste, Howard A.
Kaseman, George F.
Keeler, Margaret
Keilholtz, Charles R.
Keilholtz, Wilfred D.
Keller, Arthur C.
Kelly, John
Kelsey, Grace S.
Kiff, Ellsworth
Kitchen, Elva L.
Klag, J. C.
Knierim, Dora L.
Koehrman, H. M.
Kraft, Roy W.
Kruger, John
Kuhlman, Charles E.
Kuhlman, Edwin H.
Kuhrt, Jenny
Kumero, Emma H.
LaCroix, M. B.
Land, E. E.

Landis, L. R.
Lathrop, Albert H.
Lawicki, Albert M.
Lawler, George R.
Leaf, A. G.
Ledzianowski, Stephen S.
Lehman, Ben
Lehmann, Paul
Lehman, Sarah B.
Lemke, Edward C.
LeRoy, LaVerne L.
Logan, George A.
Lynn, Audie J.

Mann, Harry
Mann, Milton C. W.
Manthey, Carrie S.
Marks, Clare J.
Marsh, William W.
Martin, Harry S.
Mattimore, J. T.
Maxon, F. E.
May, Howard E.
May, Miriam C.
McCoppen, George T.
McCoy, Ruth
McGinnis, David W.
McMahon, Evelyn G.
Melcher, Wm. E.
Mensing, John B.
Miller, Gifford R.
Miller, Stanley E.
Miller, Weir C.
Monroe, Kenneth A.
Moore, Carl E.
Morrow, Clyde E.
Morton, Daniel O., Jr.
Moughler, W. F.
Mowry, Wallace D.
Munn, John O.
Mumford, Jeanne A.
Murrin, Frank P.

Nagel, Herman, Jr.
Nearv, John F.
Neidlinger, Anne
Nesper, Herbert C.
Neuber, Paul

Neuber, Willy
Newcomb, F. W.

O'Brien, Mary H.
O'Connor, Thomas J.
Oehlschlegel, Helen
Oehlschlegel, Marguerite
Osgood, Sarah H.
Ott, Fred W.

Parish, Burt L.
Parsons, John E.
Peckinpough, Charles W.
Peiter, H. A.
Percival, Homer W.
Peterson, Amanda
Peterson, Joseph E.
Phelan, John J.
Pilsceker, Edith
Pohl, William
Poplawski, Felix
Porter, L. J.

Quinn, Ellen

Rankin, H. M.
Ray, Mrs. Berniece B.
Raymond, Frank B.
Redman, Clarence H.
Redmond, Harris
Reiser, Elmer V.
Rietzke, Fred H.
Roach, Felix J.
Roberts, Marjorie
Rogers, Donald M.
Rogers, Wm. V.
Rosa, Scott E.
Rosenfield, Sidney

Sackett, Miss G. B.
Sadler, Earl
Samsen, George F.
Sass, Roland H.
Sauer, Edward F.
Scanlan, Grace M.
Schaub, Della
Schmidt, Walter R.
Schneider, Sam

- Schroeder, Louis F.
Schulz, Eric P.
Schwartz, Justine J.
Seeman, Martha A.
Sharp, Jennie I.
Sharpe, Estella M.
Shepherd, Edward H.
Sherwood, James I.
Shirkey, Carl
Shull, Ollie
Silvester, Herbert
Simonds, Florence
Slayton, Harry W.
Smith, Ethel
Schmitt, Fred W.
Smith, J. H.
Smith, Martin G.
Snell, Rosa M.
Snyder, Eugene
Spieker, John K.
Sower, Wava V.
Sponseller, L. H.
Sprengel, Wm. H.
Stang, Edward C.
Stapleton, Joseph P.
Staunton, Ralph L.
Stephenson, Elmer E.
Stewart, Earl D.
Stiller, Marie
Stollberg, Frank J.
Stophlet, Harry S.
Sullwold, O. G.
Surfus, C. M.
Sydenham, E. R.
- Tabor, Frank
Tertel, John M.
Thompson, William S.
Tracy, James F.
Tracey, Robert E.
Trost, C. P.
Trout, Louis G.
- Van Karsen, LeRoy
- Walker, Judson B.
Ward, Alfred
Way, R. B.
Weiss, E. E.
Wenninger, John J.
Wernert, L. F.
Werr, Julius W.
Werst, Henry J.
West, Leslie E.
Wheeler, Frank R.
Whitaker, C. D.
Willford, James B.
Wilson, Burt
Wilson, Douglas L.
Wilson, Jay M.
Wilson, Miriam B.
Wright, H. L.
- Yark, Herbert M.
Yark, Mabel L.
- Zalecki, Walter D.
- Wagner, G. F.
Wahmhoff, Georgiana
Wake, Wm. J.

THE COLLEGE
OF
INDUSTRIAL SCIENCE



Announcements

1919 - 1920

CATALOG

1918 - 1919

THE JUNIOR COLLEGE OF ENGINEERING.

THE FACULTY.

1918-1919.

A. MONROE STOWE, A.M., Ph.D. 908 Prospect Ave.
President of the University and Professor of Education.

*FREDERICK H. EVANS, B.M.E., M.E. 1817 Lawrence Ave.
Dean of the College of Industrial Science.

*OSCAR W. IRVIN, B.S., M.S.
Professor of Physics.

HENRY R. KREIDER, A.B., A.M., Ph.D. 41 Homewood Ave.
Professor of Chemistry.

A. B., 1898, Franklin and Marshall; A. M., 1901, Franklin and Marshall; Ph. D., 1910, Johns Hopkins University; Professor of Natural Sciences, Pennsylvania State Forest Academy, Mont Alto, Pa., 1905-07; Professor of Chemistry, Baltimore Medical College, Baltimore, Md., 1910-13; Assistant Professor of Chemistry, Carleton College, Northfield, Minn., 1913-15; Professor of Chemistry, Toledo University, 1915—

FRANK EDMOND NURSE, A.B., B.D., Ph.D. 28 Empire Apts.
Professor of Modern Languages.

A. B., Dixon College, 1898; B. D., McCormick Seminary, 1904; Ph. D., Heidelberg, Germany, 1908; Instructor in Mathematics and Latin, Dixon College, 1898-1901; Hebrew Fellow of McCormick Seminary, 1904-07; Instructor in Mathematics, American College of Beirut, Syria, 1907-08; Professor of Modern Languages, College of Emporia, Kansas, 1909-10; Professor of Modern Languages, College of LaCrosse, State Normal, Wisconsin, 1911-16; Professor of Modern Languages, Marietta College, 1916-18; Professor of Modern Languages, Toledo University, 1918—

WALTER F. BROWN 2044 Horton St.
Acting Professor of Physics.

Graduate, School of Science and Technology, Pratt Institute, 1912; Mery Engineering Co., Boston, 1913-14; Watertown Light and Power Co., 1914-15; Instructor in Science and Director of Vocational Department, Central High School, Troy, N. Y., 1915-18; Acting Professor of Physics, Toledo University, 1918—

JOHN BRANDEBERRY, B.S., A.M. 1453 Poole St.
Associate Professor of Mathematics.

B. S., 1913, Mount Union College, Alliance, Ohio; M. A., 1915, Ohio State University; Science Teacher, High School, Newberry, Michigan, 1913-14; Graduate Assistant in Mathematics, Ohio State University, 1914-15; Assistant Professor of Mathematics, Toledo University, 1915-18; Associate Professor of Mathematics, 1918—

*On leave of absence, 1918-19.

ALEXANDER GWIAZDOWSKI, M.E. 555 Fernwood Ave.
Associate Professor of Mechanical Engineering.

1906-08, Stevens Institute of Technology; 1909-10, Columbia University, M. E.; Shops and Drawing Room, E. W. Bliss Co., Brooklyn, and R. Hoe & Co., New York, 1910-11; Designer, Locomobile Co., Bridgeport, Conn., 1911-12; Checker, Tool Designer and Designer of Heavy Machinery, Toledo, Cleveland and Alliance, 1912-14; Associate Professor of Mechanical Engineering, Toledo University, 1914—

*A. NORMAN LAIRD, B.C.E., M.S.
Associate Professor of Drawing and Civil Engineering.

FRANK J. PAVLICEK, Ph.B. 302 Columbia St.
Associate Professor of English.

Ph. B., Ohio State University, 1901; Graduate Student, six quarters, 1905-11, University of Chicago; Graduate Student, Summer Session, University of Michigan, 1913; Instructor, English and Public Speaking, Central High School, Toledo, 1902-15; Waite High School, Toledo, 1915-18; Associate Professor of English, Toledo University, 1918—

GUY E. VAN SICKLE, A.B., A.M. 1026 Grand Ave.
Associate Professor of Chemistry.

A. B., 1909, Ohio State University; A. M., 1911, Ohio State University; Graduate Student in Chemistry, Ohio State University, 1911-12; Student Assistant in Chemistry, Fellow in Chemistry (two years), and Graduate Instructor in Chemistry, Ohio State University, 1908-12; Assistant Chemist, Ohio Agricultural Experiment Station, Wooster, Ohio, 1912; Instructor in Chemistry, Toledo, Ohio, High Schools, 1913-18; Associate Professor of Chemistry, Toledo University, 1918—

SYLVIA B. HOLLIDAY, A.B., A.M. Norwood Apts., 19th St.
Assistant Professor of English.

A.B., Dakota Wesleyan University, 1912; Assistant Principal High School, and Teacher of English and History, Kimball, South Dakota, 1912-14; A.M., University of Montana, Missoula, Montana, 1915; Instructor in English, University of Montana, Missoula, Montana, 1915-17; Acting Dean of Women and Acting Professor of English, Toledo University, 1918; Acting Dean of Women and Assistant Professor of English, Toledo University, 1918—

HUBERT C. WOODBURY 2439 Parkwood Ave.
Instructor in Drawing.

R. BADER 530 Fernwood Ave.
Instructor, Auto Theory and Practice.

W. GWIAZDOWSKI 1020 Pinewood Ave.
Insturclor, Machine Shop Practice.

*On leave of absence, 1918-19.

FOREWORD.

At this time the demand for men with technical training is far greater than can be met. Broad-minded men see that our greatest need in this reconstruction period after the war will be for engineers. An eminent engineer recently said, "It is beyond question that for the next ten years or more engineering is everywhere going to be the most lucrative of professions." The Department of the Interior at Washington during the war constantly urged that young men taking technical training make every effort to complete their education.

With these needs in mind and with thought for the individual good of all persons of Toledo who can benefit by technical training, the Junior Engineering Division offers the technical courses outlined below.

The Junior Engineering Division of Toledo University gives two years of college work in Engineering that prepares students to enter the junior year in other universities, and also offers to those who cannot afford to go directly through college an opportunity to acquire technical training. This applies to those already employed in the industries as well as to high school graduates desiring special technical training.

The Junior Engineering Division gives the boy who resides in Toledo a chance to obtain the first two years of a technical education without leaving the city. The courses in the various branches, here outlined, parallel those given in the best technical schools of the country. The amount and character of the work has been fixed primarily by comparison with the requirements in the University of Michigan and Ohio State University.

Upon the satisfactory completion of two years of work in the Junior Engineering Division, a Junior College Engineering diploma will be given the student at the regular commencement exercises of the University. In order to obtain this diploma, the student must have removed all entrance conditions, and must have completed satisfactorily all required courses in the particular branch followed. Under no circumstances will a diploma be granted for partial or incomplete work.

REQUIREMENTS FOR ADMISSION.

By Certificate.

Students will be admitted upon presentation of a certificate from a recognized high school, evidencing the satisfactory completion of work represented by fifteen high school units.

Every candidate for admission must present the following:

- Algebra, $1\frac{1}{2}$ units.
- Plane Geometry, 1 unit.
- Physics or Chemistry, 1 unit.

English, 3 units.
History, 1 unit.
Foreign Language, 2 units.
Solid Geometry, $\frac{1}{2}$ unit.

If these subjects are not covered by the certificate presented, examinations must be taken covering the required subjects. All certificates should be mailed or brought to the Secretary, Toledo University. These certificates should be in the hands of the Secretary by August 1st.

By Examination.

Examinations will be given in September covering the required subjects. Students desiring examinations should notify the Secretary of the University not later than August 1st.

Students may be admitted with conditions in one or two subjects with the exception that no conditions are allowed in Mathematics or Science. These conditions must be removed before the end of the first semester of the second year.

FEES.

All University students are required to pay a registration fee of \$2.00 per semester. In addition, all students taking laboratory courses are required to pay a fee of \$3.00 per semester. Those taking machine shop courses are required to pay a fee of \$5.50 per semester.

PHYSICAL TRAINING.

Arrangements have been made with the Young Men's Christian Association whereby regular classes of University students are given systematic physical training. This work is required for all Junior Engineering students. Classes meet on Tuesdays from 2 to 4. Students who carry this work satisfactorily are entitled to all Y. M. C. A. privileges. The gymnasium fee is \$4.00 per semester.

SCHEDULE OF REQUIRED COURSES.

Work will be offered in four branches of Engineering—Civil, Mechanical, Electrical, and Chemical. In the first year the required work is the same in all branches except Civil Engineering. Civil Engineering students are required to take Descriptive Geometry the first year. The outline of courses follows:

FIRST YEAR ENGINEERING WORK.

First half-year Courses	Hours		Second half-year Courses	Hours	
	Class	Lab.		Class	Lab.
English 411	3	....	English 412	3	....
Chemistry 411	3	....	Chemistry 412	3	....
Chemistry 413 .....	....	6	Chemistry 414 .....	....	6
M. E. 411 .....	....	6	M. E. 412 .....	....	6
Mathematics 411	3	....	Mathematics 414	5	....
Mathematics 413	2	....	Mod. Language 412..	3	....
Mod. Language 411..	3	....	Phys. Training A & B	1	....
Phys. Training A & B	1	....		

SECOND YEAR CHEMICAL ENGINEERING.

First half-year Courses	Hours		Second half-year Courses	Hours	
	Class	Lab.		Class	Lab.
Chemistry 421	1	....	Chemistry 422	1	....
Chemistry 423 .....	....	9	Chemistry 424 .....	....	9
Chemistry 425	2	....	Chemistry 426	2	....
Mathematics 421	5	....	Chemistry 428	1	....
Physics 421	4	....	Mathematics 422	5	....
Physics 423 .....	....	3	Physics 422	4	....
C. E. 427 .....	....	6	Physics 426 .....	....	3
Phys. Training A2....	1	....	M. E. 426.....	....	6
			Phys. Training B2....	1	....

SECOND YEAR CIVIL ENGINEERING.

First half-year Courses	Hours		Second half-year Courses	Hours	
	Class	Lab.		Class	Lab.
C. E. 427.....	....	6	C. E. 428.....	....	6
C. E. 425.....	....	2	C. E. 426.....	....	2
C. E. 421.....	....	12	C. E. 422.....	2	4
Mathematics 421	5	....	Mathematics 422	5	....
Physics 421	4	....	Physics 422	4	....
Physics 423 .....	....	3	Physics 424 .....	....	3
Elective Geology	1	....	C. E. 424.....	....	8
Phys. Training A2....	1	....	Phys. Training B2....	1	....

SECOND YEAR ELECTRICAL AND MECHANICAL ENGINEERING.

First half-year		Hours		Second half-year		Hours	
Courses		Class	Lab.	Courses		Class	Lab.
C. E. 427.....	---	6		M. E. 426.....	---	6	
M. E. 429.....	---	4		M. E. 430.....	---	4	
M. E. 427.....	---	4		Mathematics 422.....	5	---	
Mathematics 421.....	5	---		C. E. 423.....	---	4	
Physics 421.....	4	---		Physics 422.....	4	---	
Physics 423.....	---	3		Physics 424.....	---	3	
M. E. 431.....	---	4		Phys. Training B2....	1	---	
Phys. Training A2....	1	---					

TWO-YEAR ELECTRICAL ENGINEERING CURRICULUM.

Purpose: To offer two years' work of college grade, preparatory to employment in the electrical industries.

Pre-requisites: Algebra, 1½ units; Plane Geometry, 1 unit; Physics, 1 unit; English, 2 units. (Physics notebook must be presented.)

First Year.

Subject	1st Semester		2nd Semester	
	Course	Hrs.	Course	Hrs.
Elementary Electricity	E. E. 411	4	E. E. 412	4
Electrical Laboratory	E. E. 413	2	E. E. 414	2
Trigonometry	Math. 413	2		
College Algebra			Math. 411	2
Woodworking & Pattern Mak'g..	M. E. 427	4	M. E. 428	4
Mechanical Drawing	M. E. 411	2	M. E. 412	4
Chemistry	Chem. 411	3	Chem. 412	3
Chemistry Laboratory	Chem. 413	2	Chem. 414	2
Total		19		20

Second Year.

Alternating Currents	E. E. 421	4	E. E. 422	4
Advanced Elec. Lab.....	E. E. 423	5	E. E. 424	5
*Analytics and Calculus.....		3		
*Mechanics				3
*Elec. Machine Design		2		2
*Machine Shop		5		
*Heat Engines ..				5
*Civics		1		
*Business English				1
Total		20		20

*These courses are a part of the Two-Year Electrical Engineering Curriculum with the content especially organized to meet the need of the two-year curriculum. They were not given during the school year of 1918-19.

EVENING JUNIOR ENGINEERING DIVISION CLASSES.

The purpose of these classes is to give men who have been unable to continue their work past the high school an opportunity to get the first two years of their Engineering College work at night.

The courses duplicate the work offered in the day courses. It is now possible to get in the evening all of the work in Drawing, Mathematics, Science, Languages, and Shop that is required for a Junior Engineering College Diploma in Civil, Mechanical, Chemical, or Electrical Engineering. In addition, the work described under the Two-Year Electrical Engineering Curriculum given in day school can be obtained in the evening.

**DESCRIPTIVE CATALOG OF COURSES OFFERED
IN THE JUNIOR ENGINEERING
COLLEGE DIVISION.*****CHEMISTRY.**

Professor Kreider and Associate Professor Van Sickle.

Chemistry 411a General Chemistry 3 hrs.

Mr. Van Sickle, First Semester, M., W., F., 8:05 A. M.

In this course the properties and chemical relations of the non-metals are studied. The fundamental principles of the science and the physico-chemical laws are emphasized. This course is not open to students who have had a year of high school Chemistry.

To be offered 1919-20.

Chemistry 411b General Chemistry 3 hrs.

Mr. Kreider, First Semester, M., W., F., 8:05 A. M.

This course is intended to teach the student the fundamental principles of the science. It deals with the non-metals, their relations and reactions. The physico-chemical laws are emphasized. About two hundred experiments are performed and results recorded in note books. Students who have had one year's Chemistry in a high school are admitted to this course.

To be offered in 1919-20.

Chemistry 412a General Chemistry 3 hrs.

Mr. Van Sickle, Second Semester, M., W., F., 8:05 A. M.

The second semester is given to the study of the reactions and compounds of the metals. The laboratory work consists of qualitative analysis. Pre-requisite Chemistry 411a.

To be offered 1919-20.

*See College of Arts courses in Foreign Languages.

Chemistry 412b General Chemistry 3 hrs.**Mr. Kreider, Second Semester, M., W., F., 8:05 A. M.**

The lectures are devoted to the study of the metals, their classification, compounds, and chemical properties, the processes of analysis and reactions. The laboratory work consists in the analysis of the solutions of metals and acids, and the dry mixtures of salts, oxides, alloys and minerals. Pre-requisite Chemistry 411b.

To be offered in 1919-20.

Chemistry 413-414 Laboratory 4 hrs.**Mr. Van Sickel, Both Semesters, M., W., 1-4 P. M.**

To accompany Chemistry 411a and 411b-412b.

To be offered in 1919-20.

Chemistry 421-422 Quantitative Analysis 2 hrs.**Mr. Kreider, Both Semesters, M., 10-11 A. M.**

The simple gravimetric methods are applied in the laboratory. This is followed by electro-analysis and a number of volumetric determinations. The principles of analysis are then applied to a large number of industrial products. The lectures cover principles and methods of laboratory work. Pre-requisite, Chemistry 111-112.

To be offered in 1919-20.

Chemistry 423-424 Laboratory 6 hrs.**Mr. Kreider, Both Semesters, M., W., 1-5 P. M.**

To accompany Chemistry 421-422.

To be offered in 1919-20.

Chemistry 425-426 Advanced General Chemistry 2 hrs.**Mr. Kreider, Both Semesters. Time to be arranged.**

This course deals with the most advanced phases of General Chemistry. Many compounds which were not previously treated are here studied, together with physical-chemical problems.

CIVIL ENGINEERING.

The courses are designed to parallel those offered in the leading Engineering Colleges. The aim is to prepare the student for work in Civil Engineering.

C. E. 421 Surveying and Plotting 5 hrs.**First Semester.**

The theory of plane surveying is studied and the manipulation and use of instruments to carry out the operations in the field is taught. The theory is supplemented by problems to emphasize and impress upon the student the application of the theory to practical problems.

To be offered 1919-20.

C. E. 422 Topographical Surveying 3 hrs.

Second Semester.

Pre-requisite Civil Engineering 421. A study in the class room and field of the theory and practice of topographical surveying and a brief consideration of its practical application in the field of engineering.

To be offered 1919-20.

- C. E. 423 Surveying and Plotting 2 hrs.**
First Semester.

A course for Mechanical and Electrical Engineering students in the manipulation and use of surveying instruments.

To be offered 1919-20.

- C. E. 424 Railroad Surveying 4 hrs.**
Second Semester.

Pre-requisite Civil Engineering 421. A study of the theory and practice of railroad surveying, including the preliminary and final locations. Special consideration is given to the economic location with reference to construction cost. Class room work is supplemented by practical problems to illustrate the various phases of railroad location.

To be offered 1919-20.

- C. E. 425-426 Topographical Drawing 2 hrs.**
Both Semesters.

A study of the various topographical signs used in topographical map making. The course includes the preparation of a series of plates using these signs, and in addition some of the surveys made in Courses 421 and 422 are mapped. Each student must be able to describe from a study of a topographical map the topography of a country.

To be offered 1919-20.

- C. E. 427-428 Descriptive Geometry 4 hrs.**
Both Semesters.

A thorough course in descriptive geometry, the solution of problems dealing with the point, line and plane; and surfaces of revolution. Practical problems solved by the use of descriptive geometry.

To be offered 1919-20.

- C. E. 427a Descriptive Geometry 3 hrs.**
First Semester.

A three-hour course in Descriptive Geometry required of all Sophomore Mechanical Engineers.

To be offered 1919-20.

ELECTRICAL ENGINEERING.**Acting Professor Brown.**

This department aims to convey not only a knowledge of facts and of fundamental theory, but also training in ability to apply such knowledge; to equip the student who is to receive no further formal instruction, with practical information required

for business or industrial life. The department aims to establish a foundation and right point of view for the student who is to continue his study along applied lines, which shall enable him to advance without confusion or loss of time in acquiring new methods and a new vocabulary.

Elec. Eng. 411-412 Elements of Electricity 4 hrs.

Mr. Brown, Second Semester, M., Tu., F., 11-12 A. M.

Magnetism; electromagnets; magnetic field due to current; measurement of voltage, current, resistance and power; calculation of simple networks; electro-chemistry; illumination; electrical measuring instruments; the generator; the motor. Text—Timbie's "Elements of Electricity."

To be offered 1919-20.

Elec. Eng. 413-414 Electrical Laboratory 4 hrs.

Mr. Brown, Second Semester, Th., 1-4 P. M.

Electrical laboratory to supplement the classroom work in the topics mentioned above. This work has special reference to the proper use of measuring instruments, as well as to the testing, care and operation of direct current generators and motors with their auxiliary apparatus.

To be offered 1919-20.

Elec. Eng. 421-422 Alternating Currents 8 hrs.

Mr. Brown, Both Semesters.

Alternating current theory:—Impedance; inductance; capacity; power factor; polyphase circuits; conversion; transformation. The construction, testing and operation of alternators, transformers, converters, synchronous and induction motors. Text—Timbie and Higbee's "Alternating Currents". (This course will be given in 1919-20, following the Elementary course mentioned above.)

To be offered 1919-20.

Elec. Eng. 423-424 Advanced Electrical Laboratory 10 hrs.

Mr. Brown, Both Semesters.

This supplements the work in alternating current theory. Much time is to be devoted to the testing of commercial direct and alternating current machinery. Excursions are to be made to various electric plants for the practical study of actual operating conditions.

To be offered 1919-20.

ENGLISH.

Associate Professor Pavlicek and Assistant Professor Holliday.

English 411-412 English Composition 6 hrs.

Mr. Pavlicek, Section 1, Both Semesters, M., W., F., 9 A. M.

Mrs. Holliday, Section 2, Both Semesters, M., W., F., 9 A. M.

Mrs. Holliday, Section 3, Both Semesters, M., W., F., 11 A. M.

The Engineering section of the first year of College English. The work is similar to that done in English 111 and 112, but draws on the sciences more for its material.

To be offered 1919-20.

MATHEMATICS.**Associate Professor Brandeberry.**

The courses are designed to parallel those offered in the leading Engineering Colleges. The aim is to give the student the proper mathematical background, in order that he may be able to cope with the problems he will meet in his future work.

Math. 411 College Algebra 3 hrs.

Mr. Brandeberry, Both Semesters, M., W., F., 9:05-10 A. M.

Rapid review of the fundamental operations and principles; theory of quadratics; ratio and proportion; progressions; imaginary and complex numbers; inequalities; variables and limits; binominal theorem; logarithms; permutations and combinations; systems of equations; determinants; series; higher equations.

To be offered 1919-20.

Math. 411-e College Algebra 3 hrs.

Mr. Brandeberry, First Semester.

Review of quadratics, and solution of higher degree equations by Horner's method, progressions, logarithms, binominal theorem, etc.

To be offered 1919-20.

Math. 413 Plane Trigonometry 2 hrs.

Mr. Brandeberry, First Semester, T., Th., 11:05-12 A. M.

Definitions and relations regarding the six trigonometric functions. Circular measurement of angles. Logarithms and formulae, and their application to the solution of all classes of triangles. Emphasis laid on identities and trigonometric equations.

To be offered 1919-20.

Math 413-e Plane Trigonometry 2 hrs.

This course can be taken either semester. For description, see Math. 413.

To be offered 1919-20.

Math. 414 Analytical Geometry 5 hrs.

Mr. Brandeberry, Second Semester, M., Tu., W., Th., F., 11:05-12 A. M.

Coordinates in the plane; curve and equation, the straight line, the circle, parabola, ellipse, and hyperbola; general equation of the second degree; transcendental curves and equations; polar coordinates, transformation of coordinates, tangents, parametric equations; Solid Analytics; the plane, the line, the sphere, quadric surfaces, and equations of the second degree.

To be offered 1919-20.

Math. 414-e Analytical Geometry 4 hrs.

Mr. Brandeberry, Both Semesters, 7-9 P. M.

This course runs the entire year and gives a total of four hours credit. For description, see Math. 414.

To be offered 1919-20.

Math. 421 Differential Calculus 5 hrs.

Mr. Brandeberry, First Semester, M., Tu., W., Th., F.,
8:05-9 P. M.

Pre-requisite, Mathematics 411, 413, 414. Variables, functions, limits, successive differentiation, etc. Practical applications of the derivative to Mechanics. Curve tracing, integration and elementary applications.

To be offered 1919-20.

Math. 421-e Differential Calculus 4 hrs.

Mr. Brandeberry, Both Semesters, 7:05-9 P. M.

This course runs the entire year and gives a total of four hours credit. For description, see Math. 421.

To be offered 1919-20.

Math. 422 Integral Calculus 5 hrs.

Mr. Brandeberry, Second Semester, M., Tu., W., Th., F.,
8:05-9 P. M.

Pre-requisite, Math. 421. Application of the definite integral to the determination of length of arcs, area, volumes, center of gravity, moment of inertia of areas and volumes, etc.; partial and total derivatives; infinite series.

To be offered 1919-20.

Math. 422-e Integral Calculus 2 hrs.

Mr. Brandeberry, Both Semesters, 7:05-9 P. M.

This course runs the entire year and gives a total of four hours' credit. It must be preceded by Math. 421 or 421e. For description, see Math. 422.

To be offered 1919-20.

MECHANICAL ENGINEERING

Associate Professor Gwiazdowski and Mr. Woodbury.

M. E. 411 Elementary Mechanical Drawing 2 hrs.

Mr. Woodbury, First Semester, Th., 8-12 A. M.

The reading of technical drawings, lettering, technical sketching, drawing board geometry, and simple working drawings.

To be offered 1919-20.

M. S. 512 Shop Theory 1 hr.

Mr. Gwiazdowski, First Semester, M., W., 7:9 P. M.

Theory of: Chipping, filing, scraping, operation of milling machines, lathes, drill presses, planers, etc. Gearing, belting and transformation of energy. Technology of metals.

To be offered 1919-20.

M. E. 419 Shop Theory 1 hr.

Mr. Gwiazdowski, First Semester, F., 11-12 A. M.

Theory of machine construction. Pulleys and gears. Technology of metals.

To be offered 1919-20.

M. E. 425 Mechanical Engineering Drawing 2 hrs.**Mr. Gwiazdowski, First Semester, M., Tu., Th., F., 10-12 A. M.**

Sketching, detailing, assembling. Detailing from the layouts.

Simple layout work.

To be offered 1919-20.

PHYSICS.**Acting Professor Brown.****Physics 421 Mechanics and Heat 4 hrs.****Mr. Brown, First Semester, M., T., Th., F., 9-10 A. M.**

Introduction to the subjects of mechanics, sound and heat.

One-half the semester being devoted to mechanics. Special emphasis placed upon the solution of problems. Course designed to

meet the needs of the Sophomore students in Engineering.

Text, Reed and Guthe's College Physics.

To be offered 1919-20.

Physics 422 Electricity and Light 4 hrs.**Mr. Brown, Second Semester, M., Tu., Th., F., 9-10 A. M.**

Continuation of Course 421, covering magnetism, electricity and

light. One-half the semester being devoted to electricity. Emphasis on problems. Text same as above.

To be offered 1919-20.

Physics, 423-424 Physical Laboratory 2 hrs.**Mr. Brown, Both Semesters, W., 9-12 A. M.**

Laboratory course to accompany Physics 421-422. Required of

all Sophomore Engineering students. Text, Miller's Laboratory

Manual.

To be offered 1919-20.

REGISTER OF JUNIOR ENGINEERING COLLEGE STUDENTS.**1918-1919.****FIRST SEMESTER.****List of Regular Students.**

Name	Hrs.	Name	Hrs.
Aish, Milton R.	13	Emch, Ronald F.	18
Bame, Abe A.	18		
Batch, Richard M.	19	Friedman, Emanuel	18
Bayes, Harold H.	18		
Beck, Norman E.	18	Gill, Alfred E.	19
Bolton, J. Norman.	18	Griest, Max C.	18
Bruggemeier, Carl H.	18	Gruver, Lester	18
Curtis, Maynard	18	Haase, George J.	15
Czechowicz, F. Gerald.	18	Herring, Wilfred	22

Jochen, Bertram A.....	18	Palmer, Delos M.....	19
Johnston, Harley B.....	11	Pearson, R. Kenneth.....	21
Kerstetter, J. Howard.....	18	Riddle, Courtland C.....	18
Lindecker, Jos. B.....	18	Schelling, J. Ernest.....	18
Mattimore, Thos. J.....	12	Sheely, Robert R.....	18
Mawer, Stanley	15	Smith, Grant H.....	21
Merkle, Ernest A.....	18	Stader, Edwin J.....	19
Morgan, C. R.....	5	Steinmeyer, Clifford A.....	18
Nowak, Raymond S.....	16	Underwood, Howard R.....	21
Palmer, Arthur G.....	22	Van Brimer, J. Donald.....	18

List of Special Students.

Cobb, Carroll J..... 13

SECOND SEMESTER.

List of Special and Regular Students.

Altaffer, Leland C.	Haase, George J.
Aish, M. R.	Haverfield, Edward F.
	Howard, Harold W.
Bame, A. A.	Jochen, Bertram
Batch, Richard M.	Johnston, Harley B.
Beck, Norman	Koester, Henry F.
Becker, E. G.	Lindecker, Joseph B.
Bitzer, Charles	Lingnell, Asa Wm.
Bruggemeier, Carl H.	Manthey, Ewald
Bruun, Arthur	Mawer, Stanley W.
Burgie, Fred	Merkle, E. A.
	Morgan, Chas. R.
Cechnicki, Anthony	Newton, Philip
Cobb, Carroll J.	Nowak, Arnold R.
Curtis, Maynard	Nowak, John B.
Czechowicz, F. Gerald	Nowak, Raymond S.
Emch, Ronald F.	Palmer, Arthur G.
	Palmer, Delos M.
Forquer, Russell	Pearson, R. Kenneth
Gill, Alfred E.	Riddle, Courtland C.
Griest, Max C.	Rudey, Mack A.
Gruver, A. L.	
Guillaume, Paul	

Schneider, Harold P.
 Seeber, Clarence H.
 Sheely, Robert R.
 Shurlow, Kenneth
 Sitzenstock, Herbert L.
 Smith, Grant H.
 Southard, Lloyd A.
 Stader, Edwin J.
 Stahl, Gerald O.
 Steinmeyer, Clifford C.

Thorne, Wilson A.
 Underwood, Howard R.
 Van Brimer, J. Donald
 Wells, Donald F.
 Wing, Wallace
 Wolsiffen, Edmund S.

INDUSTRIAL DIVISION. INSTRUCTIONAL STAFF. 1918-1919.

- A. MONROE STOWE, A.M., Ph.D. 908 Prospect Ave.
President of the University and Professor of Education.
 A. P. GWIAZDOWSKI, M.E. 555 Fernwood Ave.
*Acting Head of Industrial Division and Associate Professor
 of Mechanical Engineering.*

1906-08, Stevens Institute of Technology; 1909-10, Columbia University, M. E.; Shops and Drawing-room, E. W. Bliss Co., Brooklyn, and R. Hoe & Co, New York, 1910-11; Designer, Locomobile Co., Bridgeport, Conn., 1911-12; Checker, tool designer and designer of heavy machinery, Toledo, Cleveland and Alliance, 1912-14; Designing Engineer for Western Cartridge Mfg. Co., East Alton, Ill., summer of 1917; Associate Professor of Mechanical Engineering, Toledo University, 1914—

- HENRY R. KREIDER, A.B., A.M., Ph.D. 41 Homewood Ave.
Professor of Chemistry.

A.B., Franklin and Marshall, 1898; A.M., Franklin and Marshall, 1901; Ph.D., Johns Hopkins University, 1910; Professor of Natural Sciences, Pennsylvania State Forest Academy, Mont Alto, Pa, 1905-07; Professor of Chemistry, Baltimore Medical College, Baltimore, Md., 1912-13; Assistant Professor of Chemistry Carleton College, Northfield, Minn., 1913-15; Professor of Chemistry, Toledo University, 1915—

- WALTER F. BROWN 2044 Horton St.
Acting Professor of Physics.

Graduate, School of Science and Technology, Pratt Institute, 1912; Mcry Engineering Co., Boston, 1913-14; Watertown Light & Power Co., 1914-15; Instructor in Science and Director of Vocational Department, Central High School, Troy, N. Y., 1915-18; Acting Professor of Physics, Toledo University, 1918—

- JOHN BRANDBERRY, B.S., A.M. 1453 Poole St.
Associate Professor of Mathematics.

B.S., 1913, Mount Union College, Alliance, Ohio; M.A., 1915, Ohio State University; Science Teacher, High School, Newberry, Michigan, 1913-14; Graduate Assistant in Mathematics, Ohio

State University, 1914-15; Assistant Professor of Mathematics, Toledo University, 1915-18; Associate Professor of Mathematics, 1918—

GUY E. VAN SICKLE, A.B., A.M. 1026 Grand Ave.

Associate Professor of Chemistry.

A.B., Ohio State University, 1909; A.M., Ohio State University, 1911; Graduate Student in Chemistry, Ohio State University, 1911-12; Student Assistant in Chemistry, Fellow in Chemistry (two years), and Graduate Instructor in Chemistry, Ohio State University, 1908-12; Assistant Chemist, Ohio Agricultural Experiment Station, Wooster, Ohio, 1912; Instructor in Chemistry, Toledo, Ohio, High Schools, 1913-18; Associate Professor of Chemistry, Toledo University, 1918—

H. C. WOODBURY 2439 Parkwood Ave.

Instructor, Shop Mathematics, Drafting, and English Language.

R. BADER 530 Fernwood Ave.

Instructor, Auto Repairing.

A. R. PRICE 714 Colburn St.

Assistant, Auto Repairing.

W. GWIAZDOWSKI 1020 Pinewood Ave.

Instructor, Machine Shop.

J. GWIAZDOWSKI
Assistant. Machine Shop.

A. NETTER
Assistant. Machine Shop.

C. WAGENHAUSER 515 Chestnut St.

Instructor, Machine Shop.

*J. A. HUGHES
Assistant. Machine Shop.

*W. C. PRALL
Assistant. Machine Shop.

R. M. SPRAGUE 512 Platt St.

Instructor, Shop Mathematics.

A. W. STUART 1909 Jefferson Ave.

Instructor, Shop Mathematics.

*J. H. PEAKE
Assistant, Drafting.

*R. H. BECKER
Assistant, Drafting.

BERT JOCHEN
Assistant, Drafting.

G. TEMPLE
Assistant, Drafting.

*Not with the University at present.

DEPARTMENT OF MECHANICAL ENGINEERING.

Associate Professor A. P. Gwiazdowski and Assistants.

This is the age of specialization and speed. We have neither time nor wish to spend five or even three years as apprentices. Thousands of immigrants did not have opportunity to learn the trade in a modern way. Our foremen need additional knowledge of how the neighbor is attacking his daily problems.

The aim of the Industrial work of the Mechanical Engineering Department is to serve the above enumerated classes of our citizens. This service means the increased efficiency and income to an employee, and the increased supply of skilled mechanics and draftsmen to the employer. Shop and drafting room instructors are taken from the factories. The system in conducting shop work and drawing room is a duplicate of a small modern business, where nine different machines and all kinds of tools are made.

The marvelous rapid development of the Industrial Division is limited in its progress by the equipment alone.

DEPARTMENT OF CIVIL ENGINEERING.

This department satisfies the long-felt demand for practical courses, based upon scientific principles, by young engineers, contractors and foremen.

A good many engineering graduates, by circumstances or choice, change their lines of work. These courses will assist them in adjusting themselves to new conditions.

DEPARTMENT OF ELECTRICAL ENGINEERING AND CHEMISTRY.

Acting Professor Brown and Professor Kreider.

"Do it electrically" seems to be a slogan of this century. The wonderful development of chemistry and electricity was demonstrated in the great European War. The effect of that development is felt by every human being. The complexity of the subjects and the speed with which they increase the volume of those branches of our knowledge demand a constant contact of an investigator and a practical man.

GENERAL DESCRIPTION OF SHOP COURSES.

Shop Practice.

First Year. Chipping, filing, scraping; operating drill press, lathe, milling machine, shaper, planer, universal tool grinder.

Second Year. First Semester: Continuation of the first year work. Second Semester: Tool-making.

Third Year. Tool and die-making.

Good execution of the assigned work, speed and precision are required from the students.

Shop Theory. Discussion of the theoretical principles involved

in the operation of machine tools; gearing; use of the dividing head; composition and manufacture of metals and alloys used in machine construction; heat treatment of carbon and high speed steels; theory of tool and die-making.

Shop Mathematics. Three sections: (a) Arithmetic with applications; (b) Algebra and Geometry with applications; (c) Trigonometry with applications.

Machine Drawing. Principles of orthographic projection. Detailing from sketches and layouts; assembling; layout work; designing of tools and dies.

Automobile Laboratory. Overhauling cars of different makes; adjusting carburetors; special work in testing; adjusting and repairing magnetos; starters; generators and batteries.

Mechanics. Statics and dynamics. Very practical course.

Civics. The rights and duties of a citizen. Federal, state and city government.

Shop Equipment.

One 16-inch engine lathe, quick-change gear type; 3 15-inch engine lathes, of which two have been built by the students; 1 screw-cutting bench lathe; 1 11-inch screw-cutting lathe; 1 shaper; 1 planer; 1 Universal Milling Machine; 1 12-inch drill press; 2 5-inch drill presses designed and built by students; 1 arbor press built by students; gas furnace for hardening carbon steel with pyrometer; fully equipped tool-room.

Auto Laboratory Equipment.

Different makes of engines, transmissions and rear axles; acetylene welding outfit; plant for charging and re-building of storage batteries; vulcanizing outfit; collection of ignition and starting systems.

Day Courses.*

I. Machine Shop.

1. Shop Practice, M. S. 511-d.....34 hrs. per week
2. Shop Theory, M. S. 512-d..... 3 hrs. per week
3. Machine Drawing, M. S. 513-d..... 4 hrs. per week
4. Shop Mathematics, M. S. 514-d..... 3 hrs. per week
5. English, M. S. 515-d..... 3 hrs. per week

II. Automobile Repairing.

1. Automobile Laboratory, Aut. 511-d.....34 hrs. per week
2. Automobile Theory, Aut. 512-d..... 3 hrs. per week
3. }
4. } Same as in I. Aut. 513-d, 514-d, and
5. } 515-d.

Time for completion—4 months.

III. Machine Drawing and Design.

1. Drawing, M. D. 513-d.....20 hrs. per week
2. Mathematics, M. S. 514-d..... 6 hrs. per week

3. Mechanics, M. D. 516-d..... 4 hrs. per week
 4. Shop, M. S. 511-d.....10 hrs. per week
- Time for completion—one year.

Evening Courses.*

IV. Three-Year Shop Course. 4 Nights per Week.

1. Shop Practice, M. S. 511; Mon. and
Tues., 7-9 4 hrs. per week
2. Shop Theory, M. S. 512; Thur., 7-8..... 1 hr. per week
3. Shop Mathematics, M. S., 514; Thur.,
8-91 hr. per week
4. Machine Drawing, M. S. 513; Wed., 7-9.. 2 hrs. per week

V. Three-Year Course in Auto Repairing. 4 Nights per Week.

1. Automobile Laboratory, Aut. 511; Mon.
and Tues., 7-9 4 hrs. per week
2. Automobile Theory, Aut. 512; Wed.,
7-8 1 hr. per week
3. Shop Mathematics, Aut. 514; Wed.,
8-9 1 hr. per week
4. Machine Drawing, Aut. 513; Th., 7-9.... 2 hrs. per week

VI. Machine Drawing and Design.

1. Drawing, M. S. 513; Mon. and Tu., 7-9.. 4 hrs. per week
2. Mathematics, M. S. 514; Wed., 7-9..... 2 hrs. per week
3. Mechanics, M. D. 516; Th., 7-9..... 2 hrs. per week

DESCRIPTIVE CATALOG OF COURSES OFFERED IN THE INDUSTRIAL DIVISION.

AUTOMOBILE.

Auto 511-d Auto Laboratory 15 hrs.

Mr. Bader, Both Semesters, M., Tu., W., Th., F., S.,
7:30 A. M.-4:30 P. M.

Overhauling engines, transmissions, rear axles and steering mechanisms, testing, adjusting and repairing magnetos, starting motors and generators; rebuilding storage batteries; acetylene welding.

To be offered 1919-20.

Auto 512-d Auto Theory 2 hrs.

Mr. Bader, Both Semesters, M., F., 7:30-9 A. M.

Theoretical explanation of automobile construction, repair and maintenance.

To be offered 1919-20.

*For descriptions of courses see descriptive catalog of courses, pp.

- Auto 511** **Auto Laboratory** **2 hrs.**
 Mr. Bader, Both Semesters, M., Tu., W., Th., 7-9 P. M.
 Same as Auto 511-d.
 To be offered 1919-20.
- Auto 512** **Auto Theory** **1 hr.**
 Mr. Bader, Both Semesters, F., 7-9 P. M.
 Same as Auto 512-d.
 To be offered 1919-20.
- M. D. 516** **Mechanics** **1 hr.**
 Mr. Brown, Both Semesters.
 Same as M.D. 516-d.
 To be offered 1919-20.

CHEMISTRY.

- Chemistry 515** **Introduction to Industrial Chemistry** **2 hrs.**
 Mr. Kreider, Second Semester, T., F., 7:05-8 P. M.
 The course aims to adopt the science directly to the industries and to special vocations. No preliminary knowledge of chemistry is required. The lectures are accompanied by a large number of demonstrations. In the laboratory about one hundred experiments are performed by the student.
 To be given 1919-20.
- Chemistry 517** **Introduction to Industrial Chemistry** **2 hrs.**
 Mr. Kreider and Mr. VanSickle, Second Semester,
 T., F., 8-10 P. M.
 Laboratory to Chemistry 515.
 To be offered 1919-20.

CIVIL ENGINEERING.

- C. E. 531** **Strength of Materials** **2 hrs.**
 First Semester, 7:05-9 P. M.
 Must be preceded or accompanied by Algebra.
 This course deals with forces and loads acting on structures and their parts, and the stresses produced in these parts are studied, so as to enable the student to design structures of wood, steel, concrete and other building materials.
 This course should be taken by all desiring to study any of the more advanced design courses.
- C. E. 532** **Structural Steel Design** **2 hrs.**
 First Semester, 7:05-9 P. M.
 Must be preceded by Strength of Materials.
 An elementary design course in which beams, girders, columns, and trusses of steel are designed, including the connections with adjacent positions of the structure. Part of the course will be drafting, in which the members designed are laid out as details.

This course is of importance to all who desire to study the advanced steel design courses, including buildings, bridges, etc.
To be offered 1919-20.

C. E. 534 Concrete Design 2 hrs.
Second Semester, 7:05-9 P. M.

This course takes up the design of concrete beams, girders, slabs, columns, walls, etc.

Consideration is given to the design of form work for concrete structures and also the proper proportioning of the materials, which go to form the concrete.

This course requires a knowledge of stresses in beams, etc., and should be preceded by Strength of Materials.

C. E. 535 Timber Construction and Design 2 hrs.
7:05-9 P. M.

This course begins with the design of wooden beams, columns, joints, etc., and follows through the use of timber as a means of construction.

To be offered 1919-20.

C. E. 543 Advanced Steel Design 2 hrs.
Second Semester, 7:05-9 P. M.

This course may be varied to suit the needs of the individual student. It may include the design and layout of such engineering structures as buildings, bridges, conveyors, storage bins, etc. Must be preceded by Structural Steel Design.

To be offered 1919-20.

ELECTRICAL ENGINEERING.

E. E. 511 Elements of Electricity 2 hrs.
Mr. Brown, Second Semester, T., 7-9 P. M.

Magnetism; electromagnets, measurement of voltage, current, resistance and power; calculation of simple networks; electro-chemistry, electrical measuring instruments; the generator; the motor.

To be offered 1919-20.

E. E. 513 Electrical Laboratory 1 hr.
Mr. Brown, Second Semester, W., 7-9 P. M.

This course is to supplement the class room work in Elements of Electricity 511. The work has special reference to the proper use of measuring instruments as well as to the testing, care and operation of direct current generators and motors with their auxiliary apparatus.

To be offered 1919-20.

MACHINE SHOP.

M. S. 511-d Shop Practice 15 hrs.
Mr. W. Gwiazdowski, Both Semesters, M., T., W., Th., F., S.,
7:30-4:30

Chipping, filing, scraping; operating machine tools; tool and die making.

To be offered 1919-20.

M. S. 512-d Shop Theory 2 hrs.

Mr. A. P. Gwiazdowski, Both Semesters, M., F., 7:30-9 A. M.

Discussion of the theoretical principles involved in the operation of machine tools; gearing; use of the dividing head; composition and manufacture of metals and alloys used in machine construction; heat treatment of carbon and high-speed steels; theory of tool and diemaking.

To be offered 1919-20.

M. S. 514-d Shop Mathematics 2 hrs.

Mr. Woodbury, First Semester, M., 9-10:30 A. M.,
F., 9-10:30 A. M.

Fractions; decimals; surface speed, etc., gears and pulleys; ratio and proportion.

To be offered 1919-20.

M. S. 513 Machine Drawing 1 hr.

Mr. A. P. Gwiazdowski and Mr. Woodbury, First Semester,
M., Th., F., 7-9 P. M.

Simple projection; use of instruments; lettering; dimensioning; simple details and assembly.

To be offered 1919-20.

M. S. 515-d English 1 hr.

Mr. Woodbury, First Semester, M., F., 10:30-12 A. M.

Practice in reading and writing; simple spelling of shop terms.

To be offered 1919-20.

M. D. 516-d Mechanics 2 hrs.

Mr. Brown, Both Semesters.

Statics and dynamics. Very practical course.

To be offered 1919-20.

M. S. 511 Shop Practice 2 hrs.

Mr. W. Gwiazdowski, Both Semesters, M., T., 7-9 P. M.

Same as M. S. 511-d.

To be offered 1919-20.

M. S. 512 Shop Theory 1 hr.

Mr. A. P. Gwiazdowski, Both Semesters, M., Th., 7-8 P. M.

Same as M. S. 512-d.

To be offered 1919-20.

M. S. 513 Machine Drawing 1 hr.

Mr. A. P. Gwiazdowski and Mr. Woodbury, Both Semesters,

W., 7-9 P. M.

Same as 513-d.

To be offered 1919-20.

M. S. 514 **Shop Mathematics** **1 hr.**

Mr. Stuart and Mr. Sprague, Both Semesters, M., T., F.,
7-9 P. M.

Same as M. S. 514-d.
To be offered 1919-20.

MATHEMATICS.

Math. 503-a **Elementary Algebra**

Both Semesters, F., 7:05-9 P. M.

A practical course in elementary Algebra, comprising the essential parts of that subject up to and including Quadratic Equations. This course runs the entire year, and may be entered the second semester by those who have some knowledge of the subject.

To be offered 1919-20.

Math. 503-b **Elementary Algebra**

First Semester, 7:05-9 P. M.

This course is designed to take care of those students who have some knowledge of Algebra. It consists of a rapid review of the fundamental processes, solution of simple equations, as well as quadratic equations.

This course is given the first semester only. Students desiring to take a similar course the second semester, should enroll in 503-a.

To be offered 1919-20.

Math. 504 **Plane Geometry**

First Semester, M., 7:05-9 P. M.

Essentials of plane geometry with especial attention to problems on construction, and originals.

To be offered 1919-20.

Math. 521-522 **Differential and Integral Calculus** **4 hrs.**

Mr. Brandeberry, Both Semesters, 7:05-9 P. M.

This course is intended for students, who are already more or less familiar with Calculus. Rapid review of formulas for differentiation, maxima and minima functions, and rates. Then integration is taken up, and as fast as possible applied to problems in areas, lengths, volumes, center of gravity, moment of inertia, work, etc.

To be offered 1919-20.

REGISTER OF INDUSTRIAL DIVISION STUDENTS.

1918-1919.

FIRST SEMESTER.

List of Regular Students.

Name	Hrs.	Name	Hrs.
Burgie, F. W.	3	Johnson, Helen E.....	4
Chapin, Frances	10	Ludlow, Keene	5
Davis, Lucy	6	Ott, Emmalyn	2
Donovan, Dorothy	2		

Special Students.

Blakely, Thomas
 Bogowski, Feliks
 Bojnowski, Stanley
 Boyer, Nelson F.
 Brillhart, John L.
 Burbridge, Albert J.

Carmichel, A.
 Cechnicki, Anthony
 Collins, Frank W.
 Collins, Harold
 Cordrey, Wilbur A.

Dorman, Bert H.
 Dorson, W.
 Drosch, Joseph
 Dutton, Laurie L.

Forlipa, Michael
 Friemark, Lester H.

Galbraith, Lawrence
 Graczyk, Frank J.
 Gwiazdowski, Walter

Hamm, Mary
 Hamm, Mrs. Harry H.
 Hamnett, Arthur A.
 Hendricks, Elizabeth C.
 Hoffer, Chas.

Jagelski, Stephen
 Jagills, John
 Jameson, Merle
 Janowski, T.
 Jones, Albert J.
 Jones, Mary C.

Kams, Albert
 Karwas, Kazimierz
 Kietzman, Emil
 Kietzman, Harold J.
 Kowalski, Walter
 Koziej, Basil
 Kuniega, Frank
 Kureth, Gilbert J.
 Kwiatkowski, J.

Leech, Fred C.
 Leydorf, Edward H.

Mas, Joseph
 Matejaszek, F.
 Merce, Walter G.
 Mominee, Edwin C.
 Mucci, John
 Musial, Andrew
 Myers, Geo. L.

Nowak, Arnold

Paratschek, Rudolph
Pietek, Joseph
Plagman, Clifford W.
Poplawski, Felix

Regan, Michael
Riedhart, Mike
Ritzenthaler, Martin F.
Rouiller, Harold A.

Scheerer, Howard
Schroeder, Frank H.
Shea, Wm. A.
Shrzynecki, Andrew
Sokolowski, Kazmier
Sules, A. E.

Swicza, Thomas
Szarek, Stanley
Szwajczewski, S.

Tatar, Andrew
Tobin, M. J.
Tokavczyk, Wladyslaw
Tylinski, Josef

Warwick, Fred B.
Weislo, Alexander
Wirries, John H.
Wolowski, F.
Wujciak, Chester

Zulka, Bernard M.

SECOND SEMESTER.

List of Regular and Special Students.

Abrams, Louis
Aderman, A. F.
Albers, Everett E.
Amrhein, George W.
Autenheimer, Fred

Bailey, Frank A.
Barkley, W. L.
Barr, Russell R.
Beard, Roy S.
Becker, B.
Bellner, Carl J.
Bender, John W.
Bendlin, Bernard A.
Bennett, W. C.
Black, Robert E.
Blakely, T.
Begowski, Feliks
Bortel, John A.
Boshin, F. V.
Bower, Carl B.
Bozym, J.
Bracker, Jacob C.
Bremer, Alfred W.
Brockway, George S.
Brown, Leo D.
Brown, P. B.

Brumfiel, W. A.
Buckman, Dr. Ola
Buchler, Clarence E.
Bundy, Frank L.
Burgie, August E.
Burinski, Michael E.
Byers, Wayland C.

Calcamuggio, Carl L.
Carmichael, A. H.
Cauffiel, J. Lowell
Cauffiel, John T.
Chiesa, Anthony
Chilcote, Herbert E.
Chrzanowski, Edmund J.
Ciechanswski, W.
Commager, James A.
Cordrey, W. A.
Crandall, Wm. C.
Criswell, Paul
Czakowski, Nicholas

Davies, R. E.
Delbecq, Alphonse
Diefenbach, Earl F.
Dietz, Arthur J.
Ditmyer, Paul J.

Dobaczewski, Ignacz
Dorman, Burt H.
Dorson, Wm. H.
Drysdale, William
Durfee, Clarence E.

Eubank, Guy M.
Erswell, S. E.
Evans, Roy
Everitt, Steven C.

Farrell, George R.
Favre, Edmond
Fischer, Charles F.
French, Grant
French, Mayer A.
Fuller, Durward A.

Galbraith, Lawrence
Ganz, Victor E.
Goucharoff, Aleck
Good, George W.
Grabs, William C.
Graczyk, F. J.
Greenbaum, Thos. E.
Gwiazdowski, Joseph

Hall, Parker R.
Hall, Wardell M.
Hannett, A. A.
Hancox, Harold A.
Henderson, Howard G.
Henry, Harold
Herman, Oscar B.
Herman, Rudolph V.
Hillman, Z. A.
Hitchins, L. F.
Horen, Henry F.
Howard, E.

Jablonski, Bronislaw
Jackowiak, John
Jackson, William E.
Jagelski, Stephen
Jankowski, Florian
Johnson, Alex. H.
Johnson, E. K.
Jones, Frank O.
Joseph, George K.

Kams, Albert L.
Kasdir, Wm.
Kecheley, H. T.
Keller, Carlton J.
Keller, J. W.
Kessler, Philip
Kietzman, Harold J.
Klein, Fred B.
Knapinski, John
Knoblauch, Ralph R.
Konicki, Wacław
Koscielwy, Chas.
Koziej, Basil
Kozlowski, Stanley
Krashmer, Clifford E.
Kureth, Gilbert J.
Kurtz, G. Adolph
Kushal, James

Lake, Omar
Lang, Alfred H.
Lashaway, Wm.
Laver, Bernard K.
Leech, Fred C.
Lewis, John D.
Linville, John T.
Littlefield, Myron R.
Loeb, Joseph C.
Ludlow, Keene T.

Mallory, Robert R.
Martin, R. M.
Masell, Wm.
McDonald, A. E.
McLaughlin, John J.
Melczak, Louis
Mikolajzak, V.
Miller, Wesley
Mocydlewicz, Thomas
Moerder, Fred
Mucci, John
Muck, Andrew J.
Mueller, Godfrey
Myers, H. L.

Nagle, James E.

Organo, Bernardo

Owsianka, Stanley

Page, Leo C.

Pakulski, Waclaw

Pearse, Thomas C.

Petcoff, Tony

Pietek, Joseph

Plagman, Clifford

Plumb, Miller

Poggemeyer, Burnett H.

Pool, Richard M.

Pozniak, Steve

Price, Lewis W.

Przybylski, Alois

Rabbitt, Russell

Racheff, Stephan

Reece, Joseph A.

Regan, Thomas W.

Rex, John

Riedhart, Mike

Risser, Thaddeus

Ritzenthaler, Martin F.

Rivett, Raymond

Rogers, Fletcher

Rood, Carlton

Rouiller, Harold A.

St. Armand, Edward J.

Sawyer, Albert W.

Saxby, John N.

Schaefer, George H.

Schroeder, Frank H.

Schuldt, Henry

Schwanzl, William

Schweitzer, Edward P.

Scott, George P.

Shaver, Charles H.

Shaw, Robert H.

Shea, W. A.

Sichenede, Edward

Snyder, George H.

Snyder, Harold H.

Sokolowski, Kaismer

Soncrant, Eber R.

Spross, George M.

Stahl, J. H.

Steele, Norman O.

Steinem, Edgar

Stepnswski, Julian

Streetz, William A.

Strong, Harry B.

Sahrweiler, Roy

Sules, Adam E.

Sutton, Horace S.

Tater, Andrew

Temple, Glo

Tuck, Harry W.

Tylinski, Joseph

Ureche, Chas.

Vizneau, G. B.

Warwick, Fred B.

Weiker, Walton W.

Whitney, Esmond G.

Whitney, H. L.

Wilsey, J. D.

Wilson, Glenn E.

Wilson, Lester A.

Wilson, Roscoe R.

Wirries, John H.

Wollfle, Charles J.

Wolowski, Frank

Wroblewski, Edmund

Wood, J. R.

Worral, William

Yobst, George A.

Zalewski, C.

Zulinski, Louis

THE COLLEGE
OF
LAW



Announcements

1919 - 1920

CATALOG

1918 - 1919

THE FACULTY.

1918-1919.

AARON B. COHN, LL. B.,	2435 Warren St.
Dean of the Law College.	
<i>Evidence.</i>	
AMOS L. CONN, LL. B.	Perrysburg Road
<i>Elementary Law.</i>	
SHOLTO M. DOUGLAS	2252 Putnam St.
<i>Equity.</i>	
JOHN MCCABE, LL. B.	2039 Commonwealth Ave.
<i>Suretyship.</i>	
FRANK E. MILLER, LL. B.	
<i>Wills.</i>	
ORION W. NELSON	2211 Fulton St.
<i>Real Property.</i>	
JOHN A. PRICE, B.S.	3251 Detroit Ave.
<i>Contracts and Domestic Relations.</i>	
JUDGE SCOTT STAHL	231 Prescott St.
<i>Pleading.</i>	

REQUIREMENTS FOR ADMISSION.

REGULAR STUDENTS.

Certificates of graduation from one of the Toledo High Schools or from a high school with equal standards of work and requirements for graduation, or evidence of equivalent work having been successfully accomplished, are required of candidates for admission as regular students.

SPECIAL STUDENTS.

The entry of special students is not encouraged, but persons who are twenty years of age are allowed to become special students, and may pursue a selected course of study, but without the privilege of being enrolled as candidates for a degree. Should such special student subsequently become a candidate for a degree he must pass all examinations required for admission at least one school year before the time when he proposes to graduate.

Such special students must also satisfy the Faculty that they are qualified to pursue the work with profit to themselves. All special students will be required to pursue and complete the courses selected, with the same thoroughness as regular students.

ADMINISTRATIVE REGISTRATION.

CERTIFICATE OF ATTENDANCE.

A person having studied in the College of Law for a period not entitling him to be graduated, may, on application to the Dean of the College, receive an official certificate stating the time of his attendance and the subjects covered by his study.

EXAMINATIONS.

The work of the College of Law shall be characterized by completeness and thoroughness. The aim is to fit students for the general practice of the law. The University year is divided into two terms, called semesters. At the end of each, a week is set apart for the thorough examination of all students upon the work of the semester. The examinations will be in writing and final as to the work of the semester. The right to take examinations as well as the privilege of continuing one's membership in the College at any time will be conditioned upon regular attendance at classes and the manner in which one passes such examinations. When a student neglects his work and does not conform to the requirements of the College, he may at any time during the year be dropped from the rolls.

REQUIREMENTS FOR DEGREES.

No degree will be conferred upon any person who has not spent at least two full semesters in resident study in the Municipal College of Law of Toledo University.

THE DEGREE OF BACHELOR OF LAWS.

Students who before June, 1922, receive the full course of undergraduate instruction, viz.: 40 semester hours of required work and 8 semester hours of elective work, perform all the required exercises, and pass all the regular examinations, will be recommended for the degree of Bachelor of Laws.

After June, 1922, candidates for the LL.B. degree will be required to complete 120 hours of collegiate work, 50 hours of which must be satisfactorily completed in the College of Law.

FEES AND EXPENSES.

A University registration fee of \$2 per semester is charged all University students who register during registration period. The fee is \$3 for late registration. The fee tuition of full time students enrolled for eight hours of work per semester, is \$40, the first half payable upon registration, the second half at the beginning of the second semester. The tuition fee of part time law students is \$2.50 per semester hour of work carried. These fees are to be paid to the Secretary of the University and must be paid at the opening of each half year. No student will be

Law 616 Partnership 2 hrs.
(Offered Second Semester, 1917-18.)

Formation of a partnership; partnership as to third persons; nature of a partnership; powers of partners; rights and remedies of creditors; duties and liabilities of partner's interest; dissolution of partnerships; accounting and distribution; limited partnership. Lecture and text book.

Law 621 Sales and Personal Property 2 hrs.
(Offered First Semester, 1917-18.)

Sales and contracts to sell; statute of frauds; conditions and warranties, and remedies for breach thereof; delivery; acceptance and receipt; seller's lien; stoppage in transit; bills of lading and jus disponendi; uniform "Sales Act"; Factor's Acts. Lectures and text book.

Law 622 Agency 2 hrs.
(Offered Second Semester, 1917-18.)

Creation of the relation; liability of principal for acts of agent; agent's liability to third persons; disclosed and undisclosed principals; duties of principal and agent to each other; delegation of authority; revocation; ratification. Lectures and text book.

Law 623-624-637 Real Property and Conveyancing 6 hrs.
(Offered 1916-17.)

Distinction between real and personal property; acquisition, possession and transfer of rights in personal property; incidents of ownership in real property; tenure; estate; seizen; uses and trusts; mines; wild animals; border trees; emblements; fixtures; waste; profits; streams; percolating waters; surface waters; easements; covenants running with the land, franchises; rents; landlord and tenant; highways; remainders; executory interests; reversions. Rule in Shelley's Case; rule against perpetuities.

Transfer of estates by will and adverse possession; conveyance to strangers; description of property granted; boundaries; estates created; incorporel hereditaments; deeds; covenants for title; mortgages; remedies and remedial rights and agent to each other; delegation of authority; revocation; ratification; liens and chattel mortgages.

Systematic instruction in the substantive law of conveyancing and a thorough drill in the actual preparation of all the more important forms of conveyances, including deeds, mortgages, wills, assignments, corporate and partnership articles, and such other instruments as a lawyer in actual practice is likely to be called upon to prepare, is also given in connection with this course. Text book and lectures.

Law 625 Criminal Law and Procedure 2 hrs.
(Offered First Semester, 1917-18.)

Criminal law and statutory offenses; intent in general and as affected by circumstances, as insanity, intoxication, infancy, coercion, ignorance or mistake; justification; consent; condonation; contributory acts; jurisdiction; crimes against the person, property, public policy, health, peace, decency and morality; pleading; trial; evidence; proceedings after verdict. Lectures and text book.

Law 631-632 Equity Jurisprudence 4 hrs.
(Offered 1916-17.)

The origin and development of equity jurisdiction; general maxims; equitable titles, including an exhaustive study of trusts and of the powers, duties and liabilities of trustees. Grounds of relief in equity; equitable estoppel; election, satisfaction, notice, priorities and subrogation. Bills of peace; bills of quia timet; interpleader; injunctions; specific performance and receivers. Lectures and text book.

Law 633-634 Corporations 4 hrs.
(Offered 1916-17 and 1917-18.)

The nature and classes of corporations; their creation, charter and organization; corporate franchises; contracts and powers; consolidations and combinations in restraint of trade and competition. The doctrine of ultra vires; torts and crimes of corporation; control of corporations, state and national; correlative rights of a corporation, shareholders, officers, promoters, and creditors. Creation and control of public corporations; constitutional limitation concerning the same; police powers; control of streets and highways; powers of taxation and assessments; eminent domain; corporate powers; municipal securities; charters; ordinances; liabilities and duties. Lectures and text book.

Law 635 Negotiable Instruments 2 hrs.
(Offered First Semester, 1916-17.)

Formal requisites; acceptance; indorsement; transfer; obligations of parties to bills and notes; diligence in presentments for acceptance or payment and notice of dishonor and protest; checks; bonds; negotiable instruments statute. Lectures and text book.

Law 636 Suretyship 2 hrs.
(Offered Second Semesters, 1916-17 and 1917-18.)

Suretyship and guaranty; the effect of the statute of frauds; surety's defenses; the right of subrogation; indemnity; contribution; exoneration; surety's rights to creditor's indemnities and vice versa. Lectures and text book.

Law 637 Real Property (Advanced Course) 2 hrs.
(Offered First Semester, 1917-18.)

Law 641 Damages 2 hrs.
(Offered First Semester, 1917-18.)

Function of court and jury in estimating damages; nominal, exemplary, liquidated, direct and consequential and avoidable damages. Counsel fees; certainty; compensation; damages for pecuniary interests; damages in actions of tort and contract; pain; mental suffering; aggravation and mitigation. Lectures and text book.

Law 642 Pleading 2 hrs.
(Offered Second Semester, 1917-18.)

Principal rules of common law pleading; demurrers; pleas by way of confession and avoidance; pleas by way of traverse;

duplicity; departure; new assignment and motions based on pleadings; distinction between the more frequent forms of common law actions. Principles of code pleadings; principles and rules of affirmative statement; principles and methods of defensive pleadings under the codes; principle of real party in interest; principles of the one form of civil action. Lectures and text book.

Law 643-644**Evidence****4 hrs.****(Offered 1916-17.)**

Judicial notice; presumptions; burden of proof; admissions; confessions; law and fact; character evidence; rule against hearsay; dying declarations as to pedigree and matters of public interest; declarations in regular course of business; declarations showing mental or physical conditions; res gestae; opinion evidence; real evidence; proof of contents and authorship; account books; parole evidence rule; competency of witnesses; privilege; writings; rules governing examination of witnesses. Lectures and text book.

Law 645**Wills****2 hrs.****(Offered First Semester, 1916-17.)**

Gifts Causa mortis; descent and distribution; testamentary capacity; execution; revocation, and revival of wills; construction of wills; ademption and lapse of legacies; executors and administrators; payment of legacies; distribution of estate. Lectures and text book.

Law 646**Constitutional Law****2 hrs.****(Offered Second Semester, 1916-17.)**

Making and changing written constitutions; jurisdiction of the United States; citizenship; police power; eminent domain; taxation; ex post facto and retroactive laws; state laws; impairing obligations of contract; regulation of commerce, money, and war; due process of law. Lectures and text book.

Law E654**Insurance Law****2 hrs.****(Offered First Semester, 1917-18.)**

Covering fire, life, accident, and marine insurance; insurable interests; concealment, misrepresentation and warranty; increase of hazard, ownership, alienation, breach of condition contained in policy; perils of the sea, accident, death, suicide, death at the hands of the law; death or injury by unlawful act; amount of recovery; subrogation; waiver and estoppel; assignment of policy and rights of beneficiaries. Lectures and text book.

Law E655**Private International Law****2 hrs.****(Offered Second Semester, 1917-18.)**

A study of the law that governs in transactions between parties in different states, or in foreign countries, where the laws of the different states, or countries, as to the matter involved are different, as in judgments, marriage, divorce, legitimacy and adoption, capacity, testate and intestate succession, contracts, torts, crimes and trusts. Lectures and text book.

REGISTER OF COLLEGE OF LAW STUDENTS.

1918-1919.

FIRST SEMESTER.

List of Regular Students.

Name	Hrs.	Name	Hrs.
Applegate, Clarence J.....	6	Goins, Loyal A.	8
Binzer, Royal B.	6	Schiff, Julius	8
Davis, Chas. W.....	8	Zachman, Ray E.....	8
Epstein, Jacob W.	8		

List of Special Students.

Brandon, Jas. D.	Miller, Austin A.
Christensen, Carl J.	Miller, Sam D.
Dolder, Barbara	Oates, James
Dommann, A. E. J.	Peppers, Wavne R.
Fogleman, Claude A.	Schuman, Wm. E.
Konczal, Stanley A.	Wilson, Albert B.
Krueger, Herman A.	Zaenger, Martin R.

SECOND SEMESTER.

List of Regular and Special Students.

Applegate, Clarence J.	Linenkugel, Clara C.
Binzer, Royal B.	Lyerly, Carl H.
Brandon, James D.	McNerney, H. J.
Christensen, W.	Meyers, Jennie M.
Clash, Harwood G.	Miller, Austin A.
Coble, John F.	Oates, James
Coble, Maye	Page, Dudley W.
Davis, Charles W.	Peppers, Wayne R.
Dolder, Barbara	Satterfield, Delaware W.
Epstein, Jacob W.	Schiff, Julius M.
Fogleman, Claude A.	Schuman, Wm. E.
Goins, Loyal A.	Webb, C. R.
Konczal, Stanley A.	Wilson, A. B.
Kraus, Joseph M.	Winters, Ralph M.
Krueger, Herman A.	Zachman, Ray Edgar

THE COLLEGE
OF
PHARMACY



Announcements

1919 - 1920

CATALOG

1918 - 1919

THE FACULTY.

- A. MONROE STOWE, A.M., Ph.D. 908 Prospect Ave.
President of the University.
- WILLIAM MCKENDRIE REED, Ph.G., Ph.C. 419 W. Central Ave.
*Dean of the College and Professor of the Theory and Practice
 of Pharmacy.*
- H. R. KREIDER, Ph.D. 41 Homewood Ave.
Professor of Chemistry.
- PARK LINCOLN MYERS, M.D. 2201 Glenwood Ave.
Professor of Organic Chemistry.
- EDMUND K. KLINE 3257 Collingwood Ave.
Associate Professor of Bacteriology.
- ROY C. START, Ph. G. 2435 Warren St.
Professor of Materia Medica.
- ROLLIE L. DRYFUSE, Ph.G.
Instructor in Botany.
Laboratory Assistant in Chemistry.
- FREDERICK JUCHHOFF, LL.M., Ph.D. 208 19th St.
*Associate Professor of Accountancy in charge of Courses in
 Commercial Pharmacy.*
- E. I. MCKESSON, M.D.
Professor of Physiology.
- BESS G. EMCH, Ph.G.
Instructor in Histology.
- F. E. NURSE, A.B., Ph.D. Empire Apts.
*Professor of Modern Languages in charge of Course in
 Pharmaceutical Latin.*
- FRANK L. KLOPPENSTEIN, M.D. 2474 Fulton St.
Lecturer in Toxicology.
- JAMES AUSTIN, JR. 727 Oakwood Ave.
Lecturer in Pharmaceutical Jurisprudence.

FOREWORD.

WORK OF THE COLLEGE OF PHARMACY.

The College of Pharmacy was established in 1904 with a full course leading to the degree of Graduate in Pharmacy.

Located in the University Science Building, corner of Page and Cherry streets, in a pleasant part of the city, the College is easily reached from all directions and is within walking distance of the downtown district. All of the interurban lines entering the city from the north and west, via Cherry street, either pass the College or within a few blocks of the Science Building. The Science Building is well lighted, well ventilated, and thoroughly equipped with modern apparatus, and is especially suited to the purpose for which it is being used.

OPPORTUNITIES.

While the College authorities do not advise students to work while in College, Toledo offers exceptional opportunities to the student who has to work his way through school and college. Students desiring the co-operation of the College in securing desirable positions should apply to the Dean of the College. All students who made application last year secured good positions and the prospects this year are that there will be a great demand for part-time services of college students.

EXPENSES.

If he practices ordinary economy, the total expenses of a student should not exceed \$250 a year while attending college. Students desiring information concerning board and room should write the Dean of the College.

UNIVERSITY FEES.

*Semester Registration Fees, per semester.....	\$ 2.00
Ph.G. Course, per school year.....	56.00
Laboratory Deposit, Pharmacy and Chemistry.....	10.00
Review Course, per school year.....	60.00
Review Course, less than year, per week	2.00

ADMISSION INTO THE COLLEGE OF PHARMACY.

Students are admitted into the College of Pharmacy either as regular or as special students.

Students are admitted as regular, or matriculated students, either by certification or by examination.

Students to be admitted by certification must be able to submit certificates of graduation from a first-grade high school of Ohio, or from a secondary school rated by the educational authorities of the State as doing the work of a first-grade high school as high schools are graded by the State Department of Public Instruction in Ohio. Students desiring to be admitted by certification should make application to the University Secretary, Toledo University, Toledo, Ohio, just as early as possible. The University Secretary will then forward a blank certificate to be filled out by the high school principal or by the superintendent of schools. In each case the student will receive a certificate of admission as soon as the credentials have been passed upon.

*Extra fee of \$1.00 if student registers after registration period.

Students who desire to be admitted by examination should write the University Secretary, University Building, Toledo, Ohio, for rules and regulations governing admission by examination.

The College admits as special students applicants who are over 17 years of age and present a certificate showing the completion of two years of high school work completed in a first-grade Ohio high school, or the completion of an equivalent eight units pursued in an Academy, High School, or other educational institution, or a certificate showing four years' apprenticeship in a drug store under a registered pharmacist and of being 21 years of age prior to July 1st, 1917.

Applicants for admission, either as regular or as special students, should make application to the entrance examiner for the College of Pharmacy, care Secretary State Board of Pharmacy, Columbus, at once. The student will receive from the entrance examiner a certificate, which is required for admission either as regular or special student.

DEGREES AND CERTIFICATES.

Regular students who satisfactorily complete a two years' prescribed course of study described on pages 156 to 162 of this catalog receive from the College a certificate certifying the degree of Graduate in Pharmacy. Special students who satisfactorily complete the same course of study will receive from the College a certificate certifying the satisfactory completion of the course. Both degree and certificate are recognized by the State Board of Pharmacy.

DESCRIPTION OF COURSES OFFERED IN THE MUNICIPAL COLLEGE OF PHARMACY.

FIRST YEAR.

Pharmacy 711-712 Theory and Practice of Pharmacy 6 hrs.
Mr. Reed. Both Semesters.

A short study will be made of the history of Pharmacy, ancient and modern.

The standard pharmacopoeias and dispensatories of the different countries will be compared with a special study of the nomenclature of the U. S. Pharmacopoeia, noting the recent changes and advancement made in the last decade. The student will be required to master the weights and measures, specify gravity and specific volume. He will be made acquainted with the processes of vaporization, distillation, sublimation, desiccation, comminution, solution, filtration, percolation, crystallization, etc. The student after familiarizing himself with the foregoing, will take up the work of official pharmacy, with the systematic study of standard preparations under the heads of aquas, syrups, honeys, mucilages, emulsions, spirits, infusions, tinctures, fluid extracts,

inorganic acids, preparations of the halogens and finally, the study in detail of all the salts of the metals, beginning with the alkalis and their compounds. Each salt is carefully studied as to its official name, synonym, official description, purity, solubility, tests for identity, impurities and tests for impurities, physiological properties, dose and antidote. This will complete the work of the year in theoretical pharmacy, having covered the work up to organic substances.

Pharmacy 713-714 Pharmaceutical Laboratory Work 6 hrs.
Mr. Reed. Both Semesters.

The Laboratory work of the first year will accompany the lectures and recitations, and supply the practical aid to theoretical teaching. An obligatory list, consisting of 75 preparations, covering every phase of pharmaceutical work, is furnished each student and includes at least one preparation of each of the above named subjects and will be made in the pharmaceutical laboratory, under the supervision of the director. These preparations are retained by the student until the end of the year, at which time they are carefully inspected and credit allowed. They are the property of the respective students and can be disposed of as they see fit.

The advantages gained by this laboratory work are two-fold. First, the student becomes perfectly familiar with the apparatus used in pharmaceutical work and the manipulation of the same, giving him a technical training, which contributes much to his success in the store. Second, it gives him the practical experience which enables him to judge quickly and accurately as to the best method of making the various pharmaceutical preparations, which work is one of the daily functions of a druggist. He is thereby enabled from the first to save the time and money which might be wasted in useless experimentation.

Material. Arrangements have been made whereby the students can purchase their crude material used in this department at a minimum price; the total expense of the work should not exceed \$10, and by students grouping together, it can be reduced nearly one-half. However, we do not urge such penurious economy as will lead to a slighting of the preparations.

Text-Book. Remington's Practice of Pharmacy, latest edition. For Reference—U. S. Pharmacopoeia and U. S. Dispensatory.

Pharmacy 715 Botany 2 hrs.
Mr. Dryfuse. First Semester.

This course in Botany will aim to give the student a thorough knowledge of the various forms of plant organs, their uses and variations, with their relation to other parts; so serving to familiarize him with the various terms used in technical description of the various drugs. The study of plant organs will be carried to completion with the aid of various drugs in fresh and dried state, and will be aided by drawing, etc.

Text-Book. Baston's College Botany.

Pharmacy 716 Pharmacognosy and Vegetable Physiology 2 hrs.
Mr. Dryfuse. Second Semester.

In Pharmacognosy, the study of drugs as to recognition and identification of the various official vegetable drugs will be taken up as well as the more important unofficial ones, and by the aid of commercial specimens, drawings, and illustrations, will aim to

thoroughly familiarize the student with the drug, enabling him to recognize the specimens both in commercial and recent form, to differentiate between genuine and wrongly labeled drugs, and between good and poor specimens. This course will also treat of the active principles in relation to the drug itself, and to the fullest extent of the medicinal use and abuse of vegetable remedies. The habitat of the various drugs will be considered, together with the commercial sources, preservation, etc. The class will have access to the Herbarium of Drugs, which will give valuable aid to the student in this course.
Text-Books. Baston's College Botany. Sayer's *Materia Medica*.

Vegetable Physiology consists of the study of how the plant organs do their work, including the properties of Protoplasm. Constituents of plants. How they assimilate their food. The influence of light and temperature on the life of the plant. Movements, including sensitiveness of plants, sleep movements and growth. Reproduction, or the power which plants possess of giving rise to new individuals. Laboratory work in connection with this course will be given in Histological Laboratory, under Plant Histology.
Text-Book. Baston's College Botany.

Chemistry 711-712 Elementary Chemistry

6 hrs.

Mr. Kreider. Both Semesters.

This course will begin with a consideration of the elementary outlines of physics and its relation to the successful study of modern chemistry. Following this the subjects directly relating to Chemistry will be taken under the head of Laws of Combination in definite and multiple proportions, atomic theory, atomic weights, names of elements; beginning with the elementary gases, and studying these as to their appearance, preparation, physical properties, medicinal properties, etc., including the entire chemistry of the elements and their compounds.

Chemistry 713-714 Laboratory Courses

4 hrs.

Mr. Kreider. Both Semesters.

The above work will be greatly simplified and aided by our laboratory course, which follows each recitation and supplies the practical aid to theoretical teaching. In this course the student is furnished a complete set of apparatus and is required to complete a set of laboratory manuals, covering every phase of laboratory work, viz: the making of the gases, oxygen, hydrogen, chlorine, nitrogen, etc., the synthesis of several products, as ferrous sulphide, calcium, chloride, ammonia gas, etc., the analysis of a salt of each of the important metals. Thus enabling the student to determine readily the identity of a compound, the impurities that he might suspect it to contain, and finally, a general resume of the work of the year, both theoretical and practical.

Text-Book. Sadtler's *Pharmaceutical and Medical Chemistry*.
Reference: Smith's *Inorganic Chemistry*.

Biology 711

Human Physiology

2 hrs.

Mr. McKesson.

These courses comprise the study of the chemical macroscopical and microscopical composition of the tissues in the human body. They embrace the study of locomotion, nutrition, digestion, res-

piration, and circulation. They include also the physiology of the nervous system and the special senses. A number of hours are devoted to demonstration and experiments.

Biology 712**Plant Histology****2 hrs.****Mrs. Emch.**

A microscopic study of the tissues of seed plants, especially medicinal plants. Structure of cell and cellular contents are considered. Lecture and laboratory.

Second Semester.

Text-Book. Baston's College Botany.

Reference, Mansfield's Histology.

Latin 701**Pharmaceutical Latin****1 hr.**

This course is required by state regulations of all Pharmacy students. It aims to acquaint the student with a sufficient knowledge of Latin grammar and vocabulary to enable him to understand the technical expressions and their abbreviations so frequently occurring in the work of his profession.

Commerce 711**Commercial Pharmacy****2 hrs.****Mr. Juchhoff. First Semester.****1. Bookkeeping.**

This course, which is planned to meet the special needs of the retail pharmacist, is intended to give the student a good knowledge of the principles of single and double entry bookkeeping. Considerable drill is given in the use of the journal, purchase book, sales book, cash book, and various subsidiary records of original entry. The subject includes, further, a study of the various accounts commonly used in retail and wholesale accounting, such as the various divisions of the merchandise account, discounts, accrued items and deferred charges, inventories, controlling accounts, self-balancing ledgers, etc., and concludes with a discussion of the principles of cost accounting as applied to the manufacture of drugs and other preparations.

2. Pharmaceutical Arithmetic.

In addition to giving a thorough review of the various topics usually treated in the commercial arithmetic of high school grade, special attention is given to those calculations which have a direct bearing on the practice of commercial pharmacy, such as the metric and other systems of measurements, practical short cuts, etc.

Commerce 712**Commercial Pharmacy.****2 hrs.****Second Semester.****1. Commercial Law.**

This course considers the fundamental principles of Commercial law as applied to ordinary business operations and concludes with a resume of banking laws and practice. The first part of the course considers the following subjects: Contracts, Agency, Partnerships and Corporations, sales of personal and real property, bailments, common carriers, insurance, commercial paper, bankruptcy.

2. Economics.

The second part of the course considers some of the more fundamental principles of economics. Among the topics treated will be the production, distribution and consumption of wealth; money and banking; taxation; forms of business organization; monopolies, etc.

SECOND YEAR'S COURSE.

Pharmacy 721-722 Theory and Practice of Pharmacy

6 hrs.

Mr. Reed. Both Semesters.

For our Senior work we have adopted the method in the outline as follows:

The opening lectures and recitations are devoted to lignin and its derivatives; then its isomer, starch and the allied products, gums, mucilages, etc.; then the sugars and the products derived from them as the result of decomposition and fermentation, alcohol, ether, etc., including the various synthetic products which are derived from organic bases or acids; following these the acid saccharine fruits with the important acids which they contain are considered, and then the products obtained from them and from other plants, i. e., volatile oils, oleoresins, gum resins and balsams, naturally succeed these.

Then the classification is based upon the prominent constituents, which are found in the substances, astringents, cathartics, etc. Drugs containing alkaloids are among the last group of carbon compounds. The alkaloids are highly organized and most of them are powerful poisons. This plan thus begins with elementary substances like lignin, starch, and gum, and leads by regular progression to the most powerful compounds in the materia medica, Alkaloids.

The last half of the semester will be devoted to the study of Magistral Pharmacy, commencing with solid extemporaneous preparations under the following head:

Powders, cachets, trouches, pills and suppositories. The work of the year being completed by a thorough study and discussion of the various topics as follows: Dispensing and prescription work, which latter includes incompatibilities, best methods of filing, the physician's directions, the ethics of the entire operation. Several hundred prescriptions, covering all phases of the work done, will enter into this course, which will parallel the practical work in the free dispensary.

Text-Books. Remington's Practice of Pharmacy, latest edition; Ruddyman's Incompatibilities in Prescriptions.

Pharmacy 725-726

Materia Medica

2 hrs.

Mr. Start.

The course begins with a study of drugs under a systematic classification, arranged as follows: Therapeutical, Chemical, Physical and Botanical, including a table of therapeutical agents divided into parts, viz: Internal remedies, external remedies, and agents which act upon organisms that infest the human body. Also a list of therapeutical agents defined as hematics, alteratives, anesthetics, antilithics, antiseptics, disinfectants, etc. Following this a list of Organic Chemicals will be considered under the heads of methane derivatives and benzene or aromatic derivatives. Then a study of synonyms so arranged as to aid the student when he enters the store to recognize the large number

of preparations having the same composition, but under different trade names. Finally a study of the drugs themselves under their several groups or families.

Text-Books. Sayer's *Materia Medica*. Reference—U. S. P. and U. S. D.

Pharmacy 728**Toxicology****1 hr.****Mr. Kloppenstein.**

The course in Toxicology will embrace a general study of poisons, their effect upon the animal economy and their antidotes. A systematic classification of poisonous substances, which will aid in diagnosing and treatment.

A careful study of the more important poisons, with means for their identification and their chemical and physical antagonists. Text-Book. Tanner.

Chemistry 731-732**Organic Chemistry****4 hrs.****Mr. Myers.**

The motto of this course is, "Think Chemistry." Too often students in chemistry become mere scrap books of pasted formulas and equations.

The Senior student will be urged to think his way into organic chemistry, the chemistry of the elements and combinations that are found in the vegetable and animal world. The classification of Simon is followed in the main, and such supplementary work as may be necessary to give the student not only the names of Hydrocarbons, Alcohols, Ethers, Organic Acids, Nitrogen Compounds, etc., but a clear reason for such names and methods of divisions.

Twelve to fourteen weeks complete this didactic course, when the student is usually sufficiently grounded to enter upon the study of analytical and clinical methods; drug proving, urinalysis, etc. A laboratory course accompanies the book and lecture work in organic compounds. The student is given opportunity to examine the various organics; to make, test, decompose or convert the same by practical methods.

Text Book. Simon's *Pharmaceutical and Medical Chemistry*.

Chemistry 733-734.**Pharmaceutical Laboratory Work****6 hrs.****Mr. Reed.**

The laboratory work of the Senior course in most part differs widely from that of the first year. The first half of the semester will be devoted to the manufacture of several products which are found in the various chapters on Organic Pharmacy. A few are appended, viz: Thymol Iodide or Aristol, Acetanilid, Chloroform, Castile Soap, etc. This work will parallel the theoretical work in organic chemistry.

Following the above outline, the students will begin the study of Volumetric and Galvimetric analysis, including under this head the subjects of Qualitative and Quantitative Analysis. The detail of the work is as follows: A study of the abbreviations and signs and of the various terms used in the work, viz: volumetric solutions, normal solutions, standard solutions, indicator, burette. Thence on the readings of instruments, methods of calculating results and finally the practical work covering analysis by neutralization, as alkalimetry and acidimetry, analysis by precipitation, an estimate of the haloid salts, analysis by

oxidation, an estimate of the iron salts, including those made in the junior year's work. The work is concluded by a large number of assays as found in U. S. P. latest revision, including the alkaloidal preparations made in the first year's course, estimation of sugars, sanitary analysis of water, etc.

Text-Books: Remington's Pharmacy, latest edition; Schrimpf's Volumetric Analysis. Reference: U. S. Pharmacopoeia, U. S. Dispensatory.

Commerce 712a Commercial Pharmacy 1 hr.

Second Semester.

Advertising and Selling.

The course concludes with the consideration of the following phases of advertising and selling: The application of business and psychological principles to the opening and operation of a store with special reference to the drug store; equipment, capitalization, stock, maintenance of stock, inventories, cash and credit operations, fixing the price, advertising policy, methods, and technique.

Law 701 Pharmaceutical Jurisprudence 1 hr.

Mr. Austin.

The relation of Law and Pharmacy to each other. The law relating to the commercial transactions of the Pharmacist. Jurisprudence—its philosophy and scope. Right and wrong, common law and equity. History of Pharmacy legislation. Federal and State Food and Adulteration laws. Liability of Pharmacists, error in dispensing, for negligence, as manufacturer, etc. The course will be given in the College of Law. Second Semester.

INFORMATION OF INTEREST TO PHARMACY COLLEGE STUDENTS.

REGISTRATION.

Registration activities occur in the University Building, Eleventh and Illinois streets, September 10th to 13th. The registration hours are from 9 to 12 A. M., and from 7 to 9 P. M. If you register during these hours the fee is \$2. If you register later in the semester, the fee is \$3.

CLASS WORK.

Class work begins September 15th.

ATTENDANCE.

The College expects all students to be present at all regular classes and exercises of the College. Any student whose absences exceed one-fourth of the meetings of the class will not receive credit for the course unless the student receives permission from the Dean to substitute work for that missed in the class. Such permission is granted only upon the recommendation of the instructors concerned.

SEMESTER HOUR.

The unit in reckoning requirements for the degree of Graduate of Pharmacy is a semester hour, equivalent to one fifty-minute exercise per week for the semester (approximately eighteen weeks) and requiring for preparation approximately two hours for each exercise.

GRADES.

The student's grade is based upon class work and any tests or examinations given in the course. Three passing grades are given, namely A, B, and C. Work not done satisfactorily is marked D (incomplete) or E (failure). An incomplete must be removed before the close of the following semester. Otherwise it becomes a failure. To remove a failure it is necessary to satisfactorily complete the work of the course in class. The grade X indicates that the student has been allowed to participate in the work without credit.

EXAMINATIONS.

Mid-winter and final examinations are held for all subjects in both years of work.

THE WALDING, KINNAN & MARVIN PRIZE.

The Walding, Kinnan & Marvin Company, wholesale druggists of Toledo, in order to encourage a deeper interest in, and a more thorough study of pharmacy and pharmaceutical work, offer a U. S. Dispensatory in finest binding and latest edition to the senior student obtaining the highest percentage in pharmacy of the school year 1918-19, the minimum to be 90 per cent.

THE DEAN, THE ADVISER OF PHARMACY STUDENTS.

The Dean of the College of Pharmacy is the adviser of all College of Pharmacy students. Students should feel free to consult him at any time, either at the College or in his office in the Public Health Laboratories, Room 440, Valentine Building, corner of Adams and St. Clair streets. All new pharmacy students are urged to consult with the Dean concerning their work before the time set aside for registration.

SPECIAL CLASSES FOR NURSES.

Pharmacy 729 Sp. *Materia Medica* (For Hospitals) 1 hr.

Mr. Reed, First Semester, Th., 8:00-9:00 P. M.

This course begins with a study of drugs, under a systematic classification as follows: Therapeutical, chemical, physical, and botanical, including a table of therapeutical agents, divided into parts, viz: Internal remedies, external remedies and agents which act upon organisms that infest the human body. Also a list of therapeutical agents defined as hematics, alteratives, anesthetics, antilithics, antiseptics, disinfectants, etc., together

with a study of organic chemicals, official names, and synonyms. Especial care is taken to instruct in the constituents of medicinal plants, their uses, dose, antidote if poisonous and preparation of the same. The course is designed for nurses and those interested in Hospital work requiring a knowledge of this character. Text-Book: Stony's *Materia Medica*. Reference: U. S. P., Sayer's *mat. med.*
Offered 1919-20.

Chemistry 729 Chemistry for Hospitals

1 hr.

Mr. Reed, Second Semester, Th., 8:00-9:00 P. M.

This course begins with the theory of the structure of the Universe. The formation and composition of the three great Kingdoms, viz: mineral, vegetable, and animal. Then the study of the subjects directly relating to Elementary chemistry under the head of Atomic Theory, Elements, Atomic weights, the laws of combination, definite and multiple proportions; thence into the study of the compound substances in general use in hospitals, viz: Sodium chloride, epsom salts, bi-chloride, permanganate of Potash, magnesium citrate, calomel, oxalic acid, carbolic acid, iodine, sulphur, caustic potash, baking soda, aqua ammonia, lime water, alum, salts of iron, arsenic, etc.; thence into the study of organic chemistry as applied to the practical understanding of the following: energy and oxidation, compounds of carbon, carbohydrates, proteids, alcohols, and finally a brief review of Foods and their composition. This course is designed for nurses and those engaged in hospital work requiring a knowledge of this character. It is made especially practical and thorough and is held one hour per week for about 14 weeks, as an evening course.

Text-Book: Ottenberg, *Chemistry for Nurses*. Reference: U. S. P., Smith.
Offered 1919-20.

Bacteriology 711 Bacteriology for Nurses

1 hr.

Mr. Kline, First Semester, Th., 7:00-8:00 P. M.

A course offered in conjunction with the training schools of Toledo's Hospitals; designed to give in a course of lectures the fundamental facts of bacteriology and immunity and the part they play in the cause and treatment of disease. We take up the history and scope of Bacteriology; methods of study, including sterilization, preparation of culture media, macroscopic and microscopic differentiation, the cultivation and isolation of organisms, and animal inoculation; structure of bacteria, effect of chemical reactions. Bacteria are studied in relation to their diseases during the various steps of invasion, infection and immunity. The principles of immunity and prophylaxis as exemplified in the preparation and use of vaccines and antitoxins are explained. The classification of bacteria and the principle morphological and cultural characteristics of the great groups of bacteria are outlined with a special stress upon pathogenic organisms. Finally the bacteriology of milk, water and food stuffs is briefly considered.

Text: Eisenburg *Principles of Bacteriology*. Reference: Jordan's, *General Bacteriology*. Hiss & Zinsser, *Text Book of Bacteriology*; Kolmer, *Infection Immunity and Specific Therapy*.
To be offered 1919-20.

REGISTER OF COLLEGE OF PHARMACY STUDENTS.

1918-1919.

FIRST SEMESTER.

List of Regular Students.

Name	Hrs.	Name	Hrs.
Collard, Wayne H.....	17	Merrell, Donald C.....	20
Commager, Roger W.....	19	Rupp, Paul F.....	15
Lees, Clarence D.....	10	Taylor, John R.....	11
Longthorne, William	16		

List of Special Students.

Conger, Neil B.....	16	Ostrowski, Mrs. S. P.....	16
Kramer, Eugene J.....	16	Torgler, Ernest R.....	16
Lanning, Wyman	10		

Nurses' Training Class.

Regular.

Amos, Beatrice	Marshall, Hilda
Bowman, Leila	Miller, Vesta
Buhrer, Ruth M.	Moser, Emma J.
	Myers, Dorothy R.
Callender, Edna D.	Rice, Edith
Cook, Josephine	Sands, Eurie H.
Coy, Hazel	Schroder, Velma F.
Cramer, Sadie	Smith, Helen
Duttweiler, Pearl	Trumbull, Lola E.
England, Thelma	Waller, Beatrice M.
Gillespie, Wanda	Wells, Gladys C.
Kirktown, Emma M.	Whiteman, Doris
	Willson, Herma E.
Lathrop, Helen	Ziegler, Florence M.
Lee, Anna L.	

Special.

Collins, Loraine E.

Pontius, Alverda
Potter, Wilma M.Felger, Mabel V.
Fritch, Thelma

Quimby, Margaret

Hemphill, Reba
Hornung, ImogeneSchlosser, Anne M.
Shumaker, LucileJames, Jeanette
Johnston, Lillian

Tallman, Ruth

MacLaren, Mildred
Mong, LauraWade, Mary
Weaver, Nina**SECOND SEMESTER.****List of Regular and Special Students.**

Commager, Roger W.

Merrell, Donald C.

Kramer, Eugene

Rupp, Paul F.

Lanning, Wyman L
Lees, Clarence D.

Taylor, John R.

THE SUMMER
SESSION
1918



Announcements
1919 - 1920
CATALOG
1918 - 1919

FACULTY OF THE SUMMER SCHOOL.**1918.****A. MONROE STOWE, PH.D.***President of the University.*

F. U. QUILLIN, Ph.D., *Acting Dean of the Teachers College, Professor of Business Administration, Director of Summer School.*

Sociology and Economics.

T. L. KIBLER, Ph.D., *Dean of the College of Commerce and Business.*

Economics and Business Law.

F. H. EVANS, M.E., *Dean of the College of Industrial Science, Supervisor of the Training of Army Auto Repair Men.*

A. W. TRETTIEN, Ph.D., *Director of Psychological Clinic, Professor of Psychology.*

Psychology and Education.

SYLVIA HOLLIDAY, A.M., *Acting Dean of Women. Acting Professor of English.*

English.

GLENN D. BRADLEY, Ph.D., *Associate Professor of History.*

History.

H. R. KREIDER, Ph.D., *Professor of Chemistry.*

Chemistry and Nature Study.

A. P. GWIAZDOWSKI, M.E., *Associate Professor of Mechanical Engineering.*

Machine Shop Practice and Mathematics.

F. E. NURSE, Ph.D., *Professor of Modern Languages.*

French and Spanish.

MELLIE M. SMITH, *University Librarian.*

Library Science.

W. H. STEFFENS, *Acting Professor of Agriculture.*

Landscape Gardening.

A. J. LYNN, A.B.

Bookkeeping.

THE SUMMER SCHOOL.

1918.

The Summer School of 1918, although held in one of the darkest periods of the world war, showed a most healthy growth in numbers, in quality of students and in earnestness of purpose, both on the part of faculty and of students. It was the third summer session conducted by Toledo University. The total enrollment was 268, while that of the summer previous was but 147, indicating that this phase of the University's activities promises much in the way of future development.

The work of the Summer Session was equivalent in method, character, and credit value to that of the academic year. The teaching staff was selected almost exclusively from the regular University Faculty. While many of the courses were of special interest to school teachers and to those looking forward to university degrees, the curriculum included such courses as appealed strongly to people in the business world.

For the first time in the history of the University's Summer School night sessions of many of the classes were held. The response to this innovation was so hearty that night sessions will most probably become a permanent feature of the Summer School.

FEES.

Registration fee	\$2.00
Laboratory fee in Chemistry, per course.....	3.00
Tuition fee for non-residents of Toledo.....	5.00

ANNOUNCEMENT OF THE 1919 SUMMER SESSION.

The announcement of the 1919 Summer Session will be made in the near future. Students desiring to have offered certain courses should communicate with the University Secretary.

DESCRIPTION OF COURSES OFFERED IN THE 1918 SUMMER SESSION.

Agriculture 417S

2 hrs.

Landscape Gardening and Home Decoration

Mr. Steffens.

Formal and informal landscape design, ornamenting new homes, renovating and improving old homes. The arrangements or methods for grouping trees and shrubs, the importance and use of herbaceous plants. Rules for blending colors in flowers, contrasting foliage to produce pleasing and restful effects. Preparation of the land and planting, pruning and care of ornamental trees and shrubs. Grading, making the lawn. Fertilizing and care of the lawn. Sketches, pencil drawings and blue prints. Detail planting specifications.

Business Administration 323S Business Law 2 hrs.**Mr. Kibler.**

A popular, yet sufficiently technical course in the fundamental principles of Business Law. The following topics will give an idea of the scope of the course: formation of contracts; operation and discharge of contracts; sales of goods; bailment of goods; insurance, credits and loans; contract of guaranty and suretyship; negotiable instruments; agency; partnership; corporations; and real and personal property.

Chemistry 101S General Inorganic 2 hrs.**Mr. Kreider.**

A study of the general principles of Inorganic Chemistry, including the non-metals. The course is intended for those beginning the study of this science. It is equivalent to the first semester's work.

Chemistry 103S Laboratory (101S) 2 hrs.**Mr. Kreider, 2½ or 3 hrs. each day.****Chemistry 102S General Inorganic 2 hrs.****Mr. Kreider.**

A study of some of the important non-metals, and of the metals. Equivalent to the second semester's work. One lecture each day.

Chemistry 103S Laboratory (102S) 2 hrs.**Mr. Kreider, 2½ or 3 hrs. each day.****Economics 311S Principles of Political Economy 2 hrs.****Mr. Kibler.**

Economic thinkers have established certain principles regarding the production or making of wealth; the consumption of wealth; and the distribution or apportionment of values created in the industrial system. The course is designed to familiarize the student with the most modern statements of these economic theories.

Economics 325S Modern Economic Problems 2 hrs.**Mr. Quillin.**

In this course are studied the chief economic and financial problems confronting our government, with emphasis laid upon the great war phase of each of them. Among the problems discussed are those of the money system, the banking system, the labor question, and taxation.

English 919S Practical English**Sylvia Holliday.**

A course covering the necessary points for every person, correct speaking and writing. Especially helpful for the high school or college student, deficient in English.

English Literature 131S Shakespeare 2 hrs.

Sylvia Holliday.

A study of different plays choosing a representative drama from the different groups: *Love's Labours Lost*, *As You Like It*, *Romeo and Juliet*, *Henry V.*, *Hamlet*, and *Macbeth*.

English Literature 139S American Poets 2 hrs.

Sylvia Holliday.

A study of our better known poets, designed to acquaint the student with the literature of America pointing out the beauty and worth in each author.

French 101S Beginning French 2 hrs.

Mr. Nurse.

A thorough course in beginning French with emphasis upon the conversational side.

History 128S Modern Europe and the World War 2 hrs.

Mr. Bradley.

This course examines the underlying conditions that precipitated the Great War, together with the opening stages of the conflict. After a brief survey of European History since the rise of modern Germany, a careful analysis is made of the main factors of the present conflict.

History 122S 2 hrs.**Present Day American Historical Problems**

Mr. Bradley.

A close examination of the history of the United States during the last ten years. Such questions as the tariff, the Philippines, politics, commercial expansion, the relations of capital and labor, and the causes of America's entrance into the European War are considered.

Library Work 111S 1 hr.

Miss Smith.

This course is intended to give students a general survey of library work. It consists of lectures on the history of books and libraries, the use of the catalog, general reference books, the classification of books and the compiling of bibliographies.

Mathematics 411S College Algebra 2 hrs.

Mr. Gwiazdowski.

Rapid review of the fundamental operations and principles; theory of quadratics; ratio and proportion; progressions; imaginary and complex numbers; inequalities; variables and limits; binomial theorem; logarithms; permutations and combinations; systems of equations; determinants; series, higher equations.

Mathematics 413S Plane Trigonometry 2 hrs.

Mr. Gwiazdowski.

Definitions and relations regarding the six trigonometric functions. Circular measurement of angles. Logarithms and formulae, and their application to the solution of all classes of triangles. Emphasis laid on identities and trigonometric equations.

Mechanical Engineering 426S Machine Drawing 2 hrs.**Mr. Gwiazdowski.**

Sketching, detailing, assembling, detailing from the layouts, fundamentals of machine design.

Natural Science 907S Nature Study**Mr. Kreider.**

A study of minerals and their habits of crystalizing. A study of the life habits of animals and plants. How they multiply, adapt themselves to environment and protect themselves against their enemies.

Political Science 125S 2 hrs.**The American Federal Government****Mr. Kibler.**

A broad and fundamental course following the development of federal activities during the period of American Constitutional Government. Special attention given to the evolution of the federal government as signalized by the rapid extension of federal supervision and control over the various agencies of production. The legislative, executive and judicial departments of the Government analyzed and their functions considered.

Political Science 129S 2 hrs.**International Law and Diplomacy****Mr. Bradley.**

The fundamentals of the laws of nations. In this critical period of the world's history the problems of International Law and Diplomacy assume a more vital interest than ever before. Such questions as neutrality, the law of blockade, the law of contraband, the declaration of war and commencement of hostilities, and diplomatic intercourse are studied and discussed.

Psychology 221S Educational Psychology 2 hrs.**Mr. Trettien.**

A study of the facts and principles of the adaptive and learning processes of man from their nascence to maturity. Application will be made to the home and school training and to vocational and life guidance.

Psychology 131S Mental Tests and Measurements 2 hrs.**Mr. Trettien.**

A study is made of the standard tests and measurements. Clinical cases tested and practical work done. Mental deviation and speech defects.

Psychological Clinical Work 2 hrs.**Psychology 114S Psychology of Efficiency and Control 2 hrs.****Mr. Trettien.**

This course is designed to give an analysis of the mental problems as they occur in everyday life. Types of mental attitudes, methods of control and standards of personal efficiency are emphasized.

Secondary Education 231S Adolescence 2 hrs.

The first volume of G. Stanley Hall's Adolescence used as a basis of discussion.

Sociology 243S Educational Sociology 2 hrs.
Mr. Quillin.

The aim of this course is to present some applied sociology in school administration, discipline, class room methods, student activities, etc. It is especially designed for high school and grade teachers and taught from the point of view of one who had many years of experience in secondary school teaching and six years' experience as a high school principal. The general principles of sociology are made to connect vitally and tangibly with the average teacher's most critical problems, with the two-fold result of making the teacher more acquainted with the relationship of himself as an individual to the social groups of the school and the community, and also the relationship of the individual pupil to his social groups. In brief, the course will show the social factors in the development of the individual.

Spanish 101S Beginning Spanish 2 hrs.**REGISTER OF SUMMER SESSION STUDENTS.**

1918.

Adams, Laura M.
Aish, Milton R.
Allebach, Francis M.
Anderson, Isabel
Andres, B.
Atwood, ———
Ault, Frederick J.

Bristol, Edna
Broka, Lillian M.
Browning, Mabel
Buehler, Harold
Burger, Cornelia M.
Bzdzinch, M.

Bader, Rudolf
Baer, Alice L.
Ball, Florence G.
Bartley, Genevieve M.
Beauchaine, Elizabeth
Beauchaine, Margaret
Beck, Esther
Beck, Luella
Bernhisel, Hazel
Bertwistle, Clarence W.
Bihn, Anna
Blaine, E. G.
Blair, Hazel H. (Mrs.)
Bleckner, L. S.
Boice, John E.
Bowers, Paul
Bradley, Helen Louise
Brandon, James D.

Campbell, Clara B.
Campbell, Ellen M.
Campbell, Margaret S.
Canfield, Charles
Canfield, Dayton
Carney, Helen A.
Carpenter, Ruth M.
Carter, R. L.
Cechnicki, A.
Cherry, Anna
Clark, Marguarite
Coehrs, Theresa M.
Collins, Stella
Connelly, Alice
Connolly, Helen
Corwin, Helen
Cramer, Bruce A.
Crossley, L. M.
Cummins, Mildred

Curry, Shirley

Dean, Frances

Densmore, Catherine S.

Depenthal, Carolyn L.

Deren, T.

DeVore, Eva E.

Dietz, Hildegard A.

Dietz, S. E.

Draper, Mrs. E. A.

Draper, E. A.

Eble, Pearl Luzetta

Elgutter, Maurice

Ellis, Florence G.

Ellis, Ruth T.

Fenneberg, Emma

Fitzpatrick, Nora A.

Forlipa, M.

Foster, Eleanor

Fraker, F.

France, Gertrude F.

Fritz, Laura E.

Galbraith, L.

Galbraith, Viola A.

Gates, Raymond J.

Geller, Blanche L.

Gembarski, ———

Genfan, Charles

Gerber, Henry C.

Gillespie, Ernestine S.

Goldman, Ruth E.

Goodall, Josephine

Goulet, Aline E.

Gregg, W. B.

Gruver, A. B.

Gruver, Lester

Gwiazdowski, W.

Halloway, Lillian A.

Hamann, Ralph

Handy, L.

Harrison, Mildred E.

Hartshorn, Ola M.

Hasselbach, Wm.

Heywood, Alfred P.

Hebbeler, Ethel

Hebbeler, James F.

Hebbeler, Sarah M.

Heindel, Robert E.

Herrmann, Marie J.

Hilgemann, T. T.

Hobson, Wm. H.

Hoyt, Marian D.

Hoyt, Helen

Hubert, G.

Hubicki, ———

Jacobs, Ada Florence

Jinske, Henry

Johnson, Ethel M.

Johnson, Lela M.

Jones, Deborah

Kandil, George

Kimble, Harriet L.

Klebsattel, Aug.

Knabenshue, Mrs. E.

Knight, Susan M.

Konczal, Stanley A.

Kowalski, W.

Krajewski, J.

Krueger, Herman A.

Kruszynski, M.

Kuhrt, Jenny

Kureth, ———

Lackens, Mrs. Charles

Lathrop, Albert A.

Lavender, Charles E.

Lehmann, Paul

Levy, Goldye N.

Levy, Goldye

Lewandowski, ———

Littlefield, Margaret H.

Liu, T. C.

Long, M. Beatrice

Lok, Alma C.

Lorenz, Myrtle

Lofuquist, Alpha

Lutz, Arthur H.

McDuffie, Norman S.

McKecknie, Herbert
McLaughlin, Edna
McTigue, Alice
Mano, Tom
Maper, Katherine M.
Marshall, Jessica
Marshall, Julia
Mas, Joseph
Materny, Steven
Maxon, Roy N.
May, Rosalind
May, Virginia C.
Mefford, Della J.
Melcher, Wm. E.
Meyer, Norma
Miller, Amie
Morgan, Chas. R.
Morley, Helen
Moser, Elva
Moyer, Mary E.
Musial, J.

Nauts, Alice C.
Nelson, Margaret
Neuber, Paul
Neuber, Willy
Neville, L. Vanetta
Newbirt, Kathryn H.
Nichols, Mrs. C. E.
Nortcliffe, ———
Northcott, Marie

O'Dwyer, Margaret
Ohl, Conant
O'Neil, Dorothy
O'Neil, Margaret
O'Neill, Mrs. W. M.
Owsianka, S.

Peabody, Mrs. Ella
Peabody, Frances Mae
Pfaender, Mrs. Lilian
Phillips, Grace P.
Przybylo, ———
Pulz, F.

Quinn, Aurelia E.

Quinn, Leora

Randolph, O. B.
Randolph, Josephine
Randolph, Kathryn
Ray, Bertha
Ray, Mrs. R. B.
Redway, D. W.
Refior, Sophia R.
Ritter, Elsie
Rqach, Mary C.
Roof, Anna
Rosenfield, Sidney
Ross, Ruth
Ross, Wm.
Rouse, Mrs. F. T.

Sage, Myra H.
Schmidler, C. A.
Schmidlin, Dan M.
Schmidt, Raymond
Schneider, W. E.
Schuetze, Irene
Seek, Emma
Selner, Myrtle
Shapiro, Goldye Nettie
Sheley, Mary
Sibbet, M.
Sibbett, M. T.
Sillibourne, F.
Simonds, Florence
Sinnott, Earl
Skeldon, Harold
Skrzynecki, ———
Sloan, Mrs. W. Herbert
Smith, Harold G.
Snell, Lennette M.
Snow, Emma B.
Snodgrass, Bernard
Steele, ———
Stern, Alice W.
Stein, Clara H.
Stock, Hazel M.
Stowe, Marjorie H.
Stremper, Hildegard
Stuart, A. W.
Suchcik, ———
Sules, A.

Swica, T.
Szarek, Stanley

Taw, Gee
Taylor, Mrs. Ethel
Taylor, George A.
Taylor, Jessie S.
Thatcher, Augusta R.
Thatcher, Charles A.
Thompson, Vivian
Tiettebaum, David
Tobin, ———
Tokarczyk, W.
Tracy, James F.
Trettien, Helen

Ureche, C.
Urich, B. E.
Urschel, May Ann

Van Brimer, C. L.
Van Wormer, C. C.
Varnsakas, Emanuel C.

Wagner, G. F.
Waite, Margaret
Waldruff, Lulu E.
Warner, Frederick L.
Wasielewski, ———
Watson, Erdine
Wean, Marian C.
Weber, Elizabeth
Wernick, Arthur
Whitmer, Edna
Wilder, Thurlow C.
Willoughby, Ethel C.
Wilson, M. B.
Witkowski, ———
Wojcik, Emil
Wright, Edward F.
Wright, Florence M.
Wyborski, M.

Zaenger, Martin R.
Zajac, I.
Zergin, Ralph E.

INDEX

	Page
Administrative Officers, 1918-19.....	20
Admission Requirements	26
Arts College	37
College of Education	86
College of Commerce	100
College of Industrial Science	120
College of Law	146
College of Pharmacy	155
Announcement of Courses offered.	
College of Arts and Sciences	42-74
College of Education	88-94
College of Commerce and Business.....	103-111
College of Industrial Science	136-140
College of Law	148-151
College of Pharmacy	156-162
Administrative Regulations	25
Advance Credit	27
Arts College—Work of	36
Board of Directors	5
Calendars.	
For years 1919-1920	4
University	3
Class Routine and Scholastic Requirements.....	29
Colleges.	
College of Arts and Sciences	30
College of Education	83
College of Commerce and Business.....	97
College of Industrial Science	117
College of Law	145
College of Pharmacy	153
Courses of Instruction Described.	

	Page
Accounting	103
Advertising	105-109
Bacteriology	43
Banking	105
Biology	44
Business Administration	106
Chemistry	45
Civil Engineering	125
Diplomacy	67
Economics	47
Education	49
English	51
Elementary Education	91
English Literature	54
French	57
German	58
History	59
International Law	67
Law	148
Marketing	109
Mathematics	63-128
Mechanical Engineering	129
Pharmacy	156
Philosophy	64
Physical Education	65
Physics	65
Political Science	66
Psychology	68
Secondary Education	93
Sociology	71
Spanish	73
Transportation	111
Credits—Advanced Credits	27
Degrees—Requirements for	
Bachelor of Arts	85
Bachelor of Science	85
Bachelor of Science in Elementary Education	86
Bachelor of Science in Secondary Education	86
Master of Arts	41
Master of Science	41
Diplomas—Requirements for	
Junior College Arts Diploma.....	38
Business Administration Diploma.....	101

	Page
Junior College Engineering Diploma.....	124
Law College Degree.....	147
School of Pharmacy Degrees and Certificates.....	156
Engineering—Junior College of	
Entrance Examinations (see University Calendar).	
Admission by Examinations to University.....	121
Registration.	
How to Register.....	26-27
Changes in Registration.....	29

THE LIBRARY OF THE
JUN 29 1931
UNIVERSITY OF ILLINOIS



3 0112 112029332

Toledo University

Founded	Converted into	
1872	Toledo's Municipal	Reorganized
	University	1909
	1884	

COLLEGES OF THE UNIVERSITY

THE COLLEGE OF PHARMACY

Established in 1904.

THE COLLEGE OF ARTS AND SCIENCES

Established in 1909.

THE COLLEGE OF LAW

Established in 1904.

THE COLLEGE OF INDUSTRIAL SCIENCE

Established in 1900.

THE COLLEGE OF COMMERCE AND BUSINESS

Established in 1914.

THE COLLEGE OF EDUCATION

Established in 1916.

THE UNIVERSITY SUMMER SESSIONS

Conducted since 1916.